An Internship Report on Billing Database at IT and Billing Department of Teletalk Bangladesh Limited

An Internship Report Submitted in Partial Fulfillment of the Requirements for the Degree of

Bachelor in Computer Science & Engineering

by

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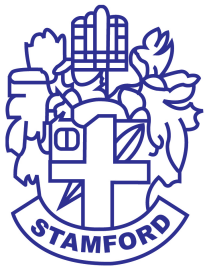

Department of Computer Science and Engineering

STAMFORD UNIVERSITY BANGLADESH

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Abstract

My internship period at Teletalk Bangladesh Ltd has provided me the opportunity and experience in database based system management and configuration.Database system are being developed day by day. In this report I described Teletalk billing Database and their architecture.I have gathered my knowledge about telecommunication system.I have successfully completed my internship as a member of an IT and Billing Department.I worked on their database system and manipulate data tables, create summery tables and analysis queries.

Approval

The Internship Report "Billing Database at IT and Billing Department Of Teletalk Bangladesh Limited" submitted by Maliha Tabassum ID: CSE 053 06712, to the Department of Computer Science & Engineering, Stamford University Bangladesh, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science & Engineering and approved as to its style and contents.

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Declaration

I hereby, declare that this Internship work presented Internship Report On Billing Database at IT and Billing Department Of Teletalk Bangladesh Limited is the outcome of the investigation, performed by me under the supervision of Mr. Ahmed Abdal Shafi Rasel, Lecturer of CSE department of Computer Science & Engineering, Stamford University Bangladesh. I also declare that no part of this Project and thereof has been or is being submitted elsewhere for the award of any degree or Diploma.

Signature and Date:

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Maliha Tabassum

Date:

Acknowledgments

I am extremely grateful and remain indebted to Al-mighty Allah who has guided in all ventures to successfully complete my Internship Report. I am thankful to the grace and the help received from him. The Internship Report would not be success, without the constant and valuable guidance of Abdal Shafi Rasel, my supervisor for the Internship Report, who is rendering all sorts of help as and when required. I am thankful for his constant constructive criticism and valuable suggestions, which benefited us a lot while implementing the Internship on ”Internship Report on Billing Database at IT and Billing Department of Teletalk Bangladesh Limited”. I am also thankful to Mohammad Shaahidur Rahman, Deputy Manager, IT and Billing. He is my Industrial Instructor. 4 months my Internship period he has given me his valuable times and proper guidelines.He provides me helpful documents and information when I write my Internship Report. He also encourage for my future. Finally I would also like to thank my parents for pushing and encouraging me to do the best in my ability.

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1 Introduction

1.1 Overview

I joined as an intern in the It and Billing department of Teletalk Bangladesh Limited on 7th September of 2017. The department is run by Md. Anwar Hossain, under the department there are several wings, such as, It, Convergent billing system (CBS), Interact connection and International roaming.I was assigned with Convergent billing system (CBS) wing.This wing maintain their billing system analysis revenues and support database system.

1.2 Objectives

- To know about the activity of It and Billing department of Teletalk Bangladesh Limited.
- The major objective of my internship was acquire on hand experience and on database based system and achieving academic and practical knowledge. I also learned how telecommunications systems work and maintain their business field.
- To find out some problems of It and Billing department division of Teletalk Bangladesh Limited and then solve this problem.

1.3 Opportunity for Study

The main focus of the study is Database Administration system of Teletalk Bangladesh Limited. But the report has tried to cover the overview of Teletalk Bangladesh

Limited IT and Billing division. The empirical part includes only the published information and current practices of Teletalk Bangladesh Limited. I was gathered knowledge about their real life query and analysis their revenues.I was prepared this report after discuss with relevant IT officer of Teletalk Bangladesh Limited. After getting their valuable opinion, information and my practical knowledge I have completed my report.

1.4 Summery of Report

In this report I described background of Teletalk, Teletalk's IT and Billing Department and acquired my knowledge.

2 Background of Teletalk Bangladesh Limited

2.1 Telecommunication Sector in Bangladesh

The liberalisation of Bangladesh's telecommunications sector began with small steps in 1989 with the issuance of a licence to a private operator for the provision of inter alia cellular mobile services to compete with Bangladesh Telegraph and Telephone Board (BTTB), the previous monopoly provider of telecommunications services within Bangladesh.Significant changes in the number of fixed and mobile services deployed in Bangladesh occurred in the late 1990s and the number of services in operation have subsequently grown exponentially in the past five years. The telecom sector in Bangladesh is rapidly emerging. Bangladesh Telecommunication Regulatory Commission (BTRC) is the regulatory authority for this sector, overseeing licensing, policy, etc. The calling code of Bangladesh is +880 [1]. Now 5 mobile operators in Bangladesh

- Grameenphone
- Banglalink
- Robi
- TeleTalk
- Airtel

Topology of Telecom Network Figure 2.1 [1].

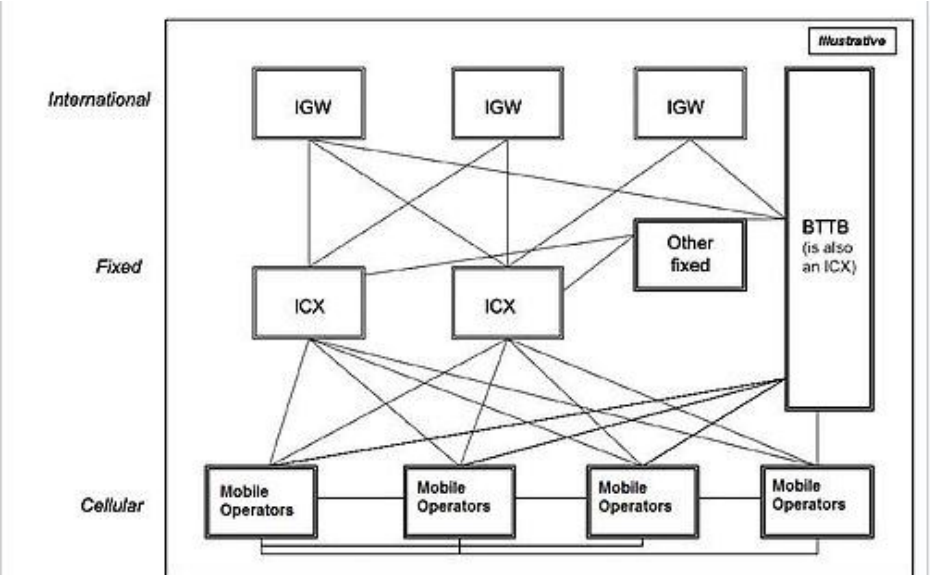


Figure 2.1: Bangladesh Telecom Network Topology

2.2 Launch of Teletalk

The long awaited launching of a mobile telecom network by a state-run enterprise had finally materialized on 31 March 2005. It also fulfilled a cherished dream of people who continuously demanded to the government for such an enterprise. The government started the Mobile Telephone Project and Bangladesh Telegraph and Telephone Board (BTTB) was entrusted with the responsibility for implementing the same. The Project work started in June 2004 and the network was soft launched on 29 December 2004. Teletalk Bangladesh Ltd. was formed to operate the network installed by BTTB and it has been successful in operating a standard network and give proper service to the people of Bangladesh. Teletalk has introduced many attractive packages and all of them have been welcomed by the market. From the very beginning of its launching. Teletalk got huge popularity as it triggered the true competition in the market.People have high expectation from Teletalk. They expect continuous network coverage all over the country, prompt customer service, and more value added services, data services of high band-width etc. from Teletalk. Teletalk must honor its customers by improving its services day-by-day so that people can realize that even in a competitive sce-

nario, the public sector organization can achieve remarkable development if they get opportunity [2].

2.3 Organization Structure of Teletalk

Teletalk Bangladesh Limited maintain this Structure Figure 2.2 [3].

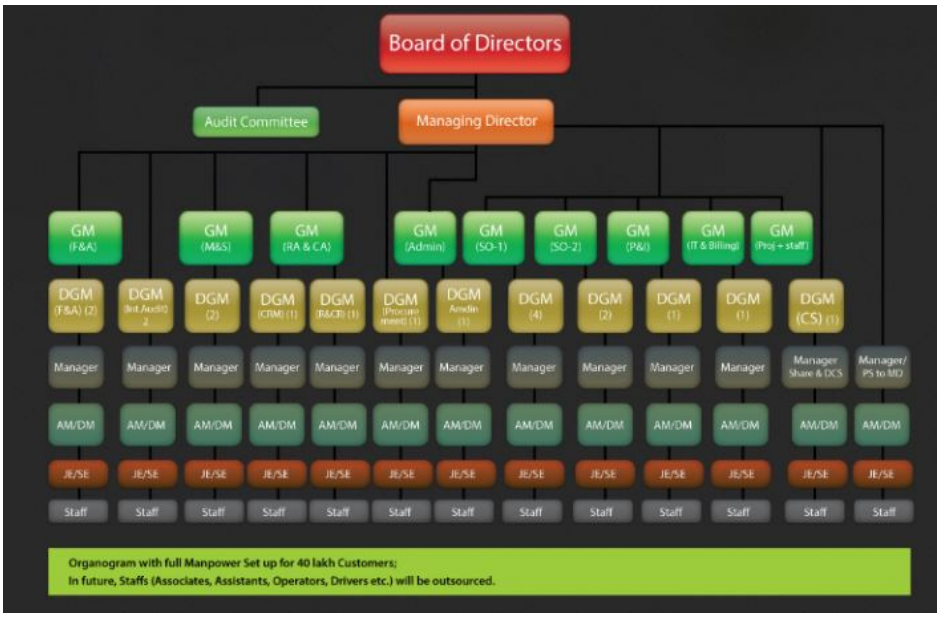


Figure 2.2: Organization Structure

2.4 Departments of the Teletalk

1. Admin
2. Audit
3. Company Secretariat
4. Corporate Strategy
5. Finance and Accounts

6. IT and Billing
7. M&E Project
8. Marketing & VAS
9. Planning and Implementation
10. Procurement
11. Regulatory and Corporate Relation
12. Sales & Distribution and CRM
13. System Operations
14. System Operations (CTG)

2.5 Teletalk Products and Services [3]

2.5.1 Prepaid

- Youth 2G
- Youth 3G
- Ekush 2G
- Ekush 3G
- Bijoy 2G
- Bijoy 3G
- Shadheen 2G
- Shadheen 3G

- Agami 2G
- Agami 3G
- Shapla

2.5.2 Postpaid

- Gravity
- Rajanigandha
- Shapla

2.5.3 3G Services

- High Speed Internet
- Mobile TV
- Vedio On Demand

2.5.4 Devices

- 3G Internet Modem
- MiFi
- Pocket Router

2.5.5 Value Added Services

- FNF-Friends and family
- VMS- Voice Mail Service

- SMS-Short Message Services
- International SMS
- Internet SMS
- International Roaming
- GPRS
- Missed Called Alert
- Call Blocking Service
- Phone Book Backup Service
- Online Recharge
- Teletalk Voice Adda
- Special Value Added Services

2.6 Mission and Vision

To innovate and constantly find new ways to enhance our services to our customers current needs and desires for the future. Our vision is to know our customers and meet their needs better than anyone else.

2.7 Objectives of Teletalk

1. To provide mobile telephone service to the people from the public sector
2. To ensure fair competition between public and private sectors and thereby to safeguard public interest
3. To meet a portion of unmitigated high demand of mobile telephone

3 Department of IT and Billing

This department divided into 3 wings.

1. IT and Network
2. Convergent Billing System(CBS)
3. Interact connection and International Roaming

3.1 IT and Network

Teletalk is basically a telecommunication company. This company has many branch offices and customer care centers at various sites of the country. To establish the IT network connectivity with the branch offices and customer care centers to the central office IT LAN and amp; WAN connectivity is an essential.IT also includes

- Mail server : In an organization like Teletalk have lots of employs in various department and they are in different places over the country. They need to have well communication with head office and each other. Besides they have their own security issue and classified information and this information must be kept secret from the world. To ensure low cost and high secure commination there is nothing then having an own mail server. If they use other public mail service those are costly and the main problem is they cant ensure the security of their data. All the user of teletalk are in same domain and the domail name is teletalk.bd.

- IP-PABX System : The IP in IP phone system refers to Voice over IP, or having phone calls routed over the internet or local network (LAN). This is great for many reasons. First of all, IP phone dont use the telephone network of telephony service provider for making calls, which will reduce costs for phone calls. Teletalk has their own IP phone in very customer care and office has IP telephone for their internal connection.

- CCTV System : IT monitor their office and customers care security. Storage CCTV records, create CCTV network and maintain CCTV network.

- Biometric office attendance System : Biometrics technology can be used as a type of employee time management system because of its ability to recognize peoples unique physiological characteristics. Biometrics based time and attendance terminals are becoming increasingly popular in todays market. Every branches of Teletalk have Biometric attendance System under the IT wing.

And office equipment like data storage devices and their all over security also maintain IT and Network wings.

3.2 Convergent Billing System(CBS)

I worked mainly Convergent Billing System(CBS).

3.2.1 Logical Networking

I Introduce the logical networking diagram of the CBS. The CBS is the core charging system in the carrier networking. Figure Figure 3.1. First of all Call Data Record(CDR) is generate in Convergent Billing Point(CBP) then CBP passing data into Record Bill Interface (RBI) and RBI passing data into LBI (Begin Library Item).Finally collect data from LBI and analysis data fro report generation.

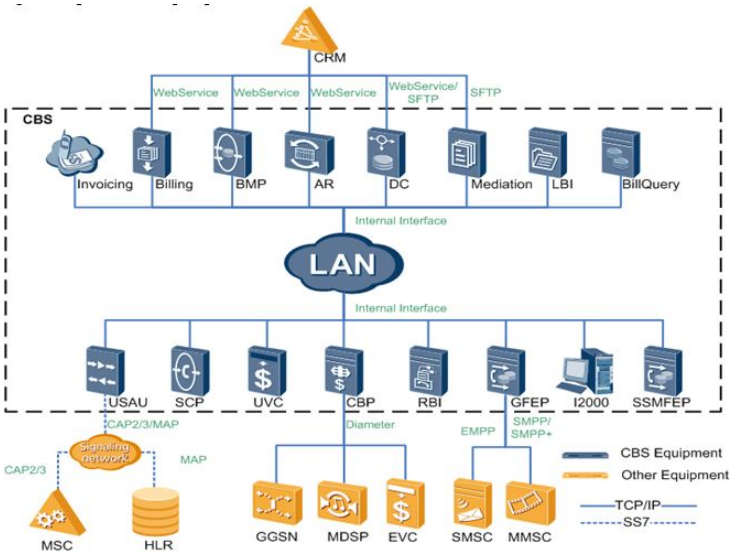


Figure 3.1: Logical networking diagram

3.3 Interconnect Billing and International Roaming

Interconnect Billing and International Roaming has some parts domestic call, international call and roaming.Domestic call means when you call one mobile operator to another mobile operator this call hit 1st ICX operator then your destination mobile operator.When teletalk call another mobile operator and another mobile operator call teletalk, they both of paid each other based on BTRC rules.International call maintain this way via IGW.Teletalk maintain International Roaming.Traditional Roaming is defined as the ability for a cellular customer to automatically make and receive voice calls, send and receive data, or access other services, including home data services, when traveling outside the geographical coverage area of the home network, by means of using a visited network.This can be done by using a communication terminal or else just by using the subscriber identity in the visited network.Teletalk connected many countries and their mobile operators for International Roaming. Interact connection and International Roaming wings maintain allover this works and analysis their monthly and yearly revenue.

4 Acquired Knowledge

4.1 Overview

The skills and the knowledges I acquired during my internship period are discussed in the subchapters.

4.2 Oracle Corporation

An Oracle database is a collection of data treated as a unit. The purpose of a database is to store and retrieve related information. A database server is the key to solving the problems of information management. In general, a server reliably manages a large amount of data in a multiuser environment so that many users can concurrently access the same data. All this is accomplished while delivering high performance. A database server also prevents unauthorized access and provides efficient solutions for failure recovery [4].

4.3 Learn basic query

When I started my internship they briefed me about their working procedure and learned me some important basic query from oracle database default schema HR. Example : Table joining, grouping, subquery, conditions etc.

Joining Table

Different types of Join in Sql.

1. NATURAL JOIN
   example: **SELECT**
   acctual_revenue
   data_revenue
   FROM TB_DW_CBS_REC_DAY
   NATURAL JOIN TB_DW_CBS_MON_DAY ;

2. LEFT OUTER
   example: **SELEC**T
   r.acctual_revenue
   m.data_revenue
   FROM TB_DW_CBS_REC_DAY r **LEFT OUTER JOIN** TB_DW_CBS_MON_DAY
   m
   ON (r.statis_date = m.statis_date)
   and (r.productname = m.productname);

3. RIGHT OUTER
   example: **SELECT**
   r.acctual_revenue
   m.data_revenue
   FROM TB_DW_CBS_REC_DAY r **RIGHT OUTER JOIN** TB_DW_CBS_MON_DAY
   m
   ON (r.statis_date = m.statis_date)
   and (r.productname = m.productname);

4. FULL OUTER JOIN
   example: **SELECT**
   r.acctual_revenue
   m.data_revenue
   FROM TB_DW_CBS_REC_DAY r **FULL OUTER JOIN** TB_DW_CBS_MON_DAY
   m
   ON (r.statis_date = m.statis_date)
   and (r.productname = m.productname);

4.4 Connect Teletalk Database

After learned basics I connected Teletalk database.They create a public connection string link @tbl and I setup this connection script in my local database. Setup connection fegure 4.1.

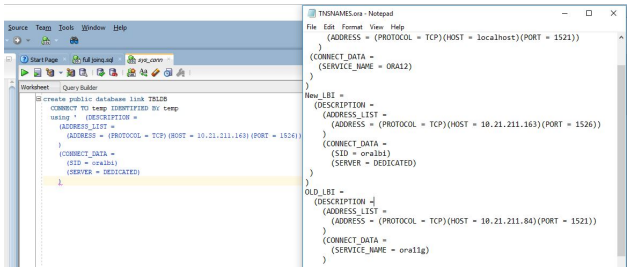


Figure 4.1: Connection Script

4.5 Flow Chart

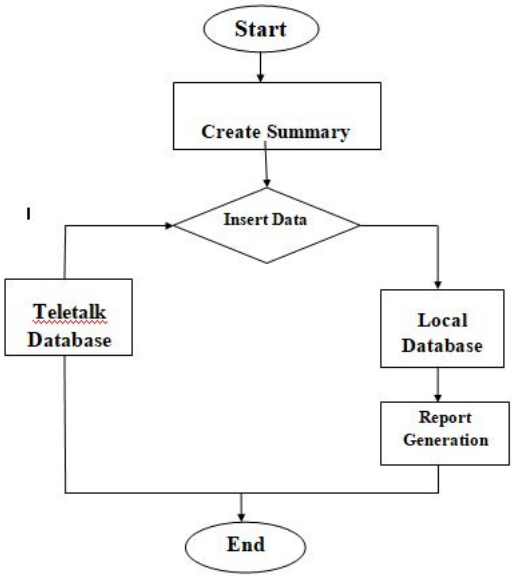


Figure 4.2: Flow Chart

4.6 Entity Relationship Diagram

Entity Relationship Diagram for package table

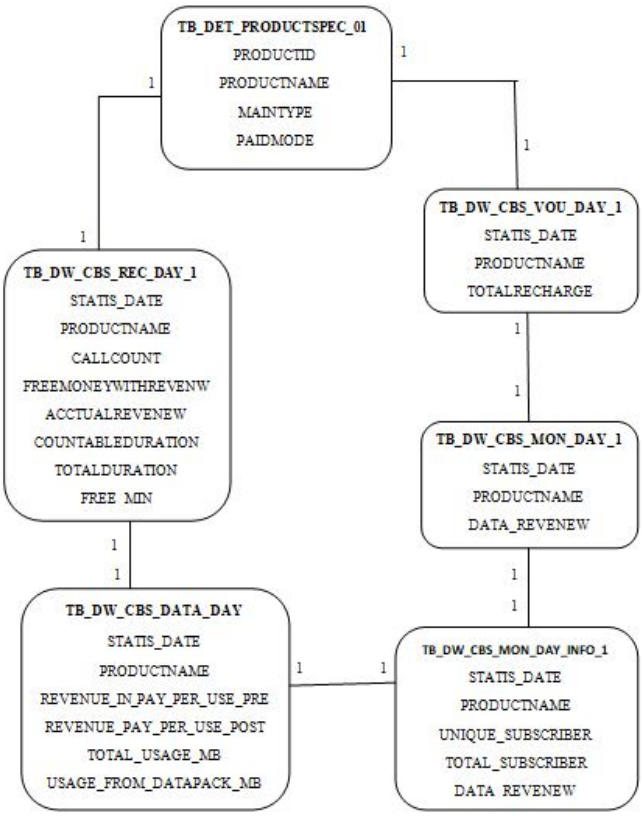


Figure 4.3: Entity Relationship Diagram

4.7 Summery Tables

Teletalk has huge data field in their data tables. All fields are important but some fields are more important I took those fields and made some summery table for my study. These are:

1. TB_DW_CBS_REC_DAY(Voice Table for Packages)

2. TB_DW_CBS_REC_DAY_MS(Voice Table for Subscribers)

3. TB_DW_CBS_MON _DAY_INFO1(Data Table for Package wise Unique Subscription and Total subscription)

4. TB_DW_CBS_MON_DAY_MS(Data Table for Subscribers)

5. TB_DW_CBS_VOU_DAY1(Recharge Table for Packages)

6. TB_DW_CBS_VOU_DAY_MS(Recharge Table for Subscribers)

7. TB_DW_CBS_DATA_DAY(Data pay per use Table for Packages)

8. TB_DW_CBS_DATA_DAY_MS(Data pay per use Table for Subscribers)

4.8 Queries For Data Insert

I am inserting data in my Summery table from Teletalk database. Inserting data queries are:

4.8.1 Voice Table For Package

insert into teletalk.TB_DW_CBS_REC_DAY
select
r.statis_date,
p.PRODUCTNAME,count(*) callcount,
round(sum(r.CHARGEOFFUNDACCOUNTS/1000000),2) freemoneywithreveneu
round (sum(r.CHARGEFROMPREPAID/1000000),2) acctualreveneu,
round(sum(r.CHARGEDURATION/60),2) countableduration,
round(sum(CALLDURATION/60),2) totalduration,
round(sum(r.CHARGEOFDURATIONACCOUNTS/60),2) free_min
from LBIDW_BGD_TELETALK.TB_DW_CBS_REC_DAY**@tbldb** r
join
LBIDW_BGD_TELETALK.TB_DET_PRODUCTSPEC_01**@tbldb3** p
on r.subcosid=p.productid

where r.subcosid **in**(**select**
p.PRODUCTID
from LBIDW_BGD_TELETALK.TB_DET_PRODUCTSPEC_01**@tbldb** p
where p.maintype=0)
and r.statis_date **in**('20171201','20171202','20171203','20171204')
and r.CALLTYPE=0
and r.SERVICEFLOW=1
and r.file_flag not like 'f
group by r.statis_date,p.productname;)

4.8.2 Recharge Table For Package

insert into TB_DW_CBS_VOU_DAY1
select
v.statis_date,p.PRODUCTNAME,
round(sum(v.RECHARGEFORPREPAID/1000000)) totalrecharge
from LBIDW_BGD_TELETALK.TB_DW_CBS_VOU_DAY**@tbldb** v
join
LBIDW_BGD_TELETALK.TB_DET_PRODUCTSPEC_01**@tbldb** p
on v.subcosid=p.productid
where v.subcosid **in(select**
p.PRODUCTID
from LBIDW_BGD_TELETALK.TB_DET_PRODUCTSPEC_01@tbldb p
where p.maintype=0)
and v.statis_date='20171110'
group by v.statis_date,p.productname;

4.8.3 Data Table For Package

insert into TB_DW_CBS_MON_DAY
select
m.statis_date,
p.PRODUCTNAME,
round(sum(m.DEDUCTFROMPREPAID/1000000),2) revenew

from LBIDW_BGD_TELETALK.TB_DW_CBS_MON_DAY**@tbldb** m
join
LBIDW_BGD_TELETALK.TB_DET_PRODUCTSPEC_01@tbldb p
on m.subcosid=p.productid
where m.subcosid **in(select**
p.PRODUCTID
from LBIDW_BGD_TELETALK.TB_DET_PRODUCTSPEC_01**@tbldb** p
where p.maintype=0)
and m.statis_date **in**('20171201','20171202','20171203','20171204')
group by m.statis_date,p.productname;

4.8.4 Data Pay Per Use Table For Package

insert into TB_DW_CBS_DATA_DAY
select
d.statis_date,
p.productname,
round (sum(d.CHARGEFROMPREPAID/1000000),2) revenue_in_pay_per_use_pre
,
round (sum(d.CHARGEFROMPOSTPAID/1000000),2) revenue_pay_per_use_post,
round(sum(d.totalflux/(1024*1024))) total_usage_mb,
round(sum(d.chargeoffluxaccounts/(1024*1024))) usage_from_datapack_mb
from LBIDW_BGD_TELETALK.TB_DW_CBS_DATA_DAY**@tbldb3** d
join
LBIDW_BGD_TELETALK.TB_DET_PRODUCTSPEC_01**@tbldb3** p
on d.subcosid=p.productid
where d.subcosid **in(select**
p.PRODUCTID **from LBIDW_BGD_TELETALK.**TB_DET_PRODUCTSPEC_01**@tbldb3**
p **where** p.maintype=0)
and d.statis_date **in**('20171211','20171212','20171213','20171214','20171215','20171216','201712
group by d.statis_date,p.productname;

4.9 Queries Analysis

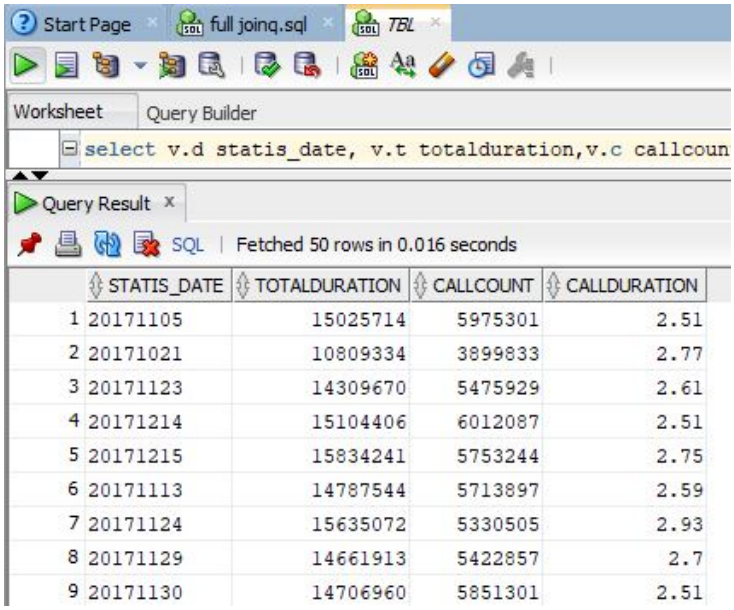
I analysis some queries based on summery table for Teletalk.

4.9.1 Report on voice record

- Day wise average call duration

  – **select**
  statis_date,
  round(sum(totalduration),2) totalduratiot,
  round(sum(callcount),2) callcount,
  round(sum(totalduration) /(**sum**(callcount)),2) callduration
  from TB_DW_CBS_REC_DAY
  group by statis_date;

Figure 4.4.



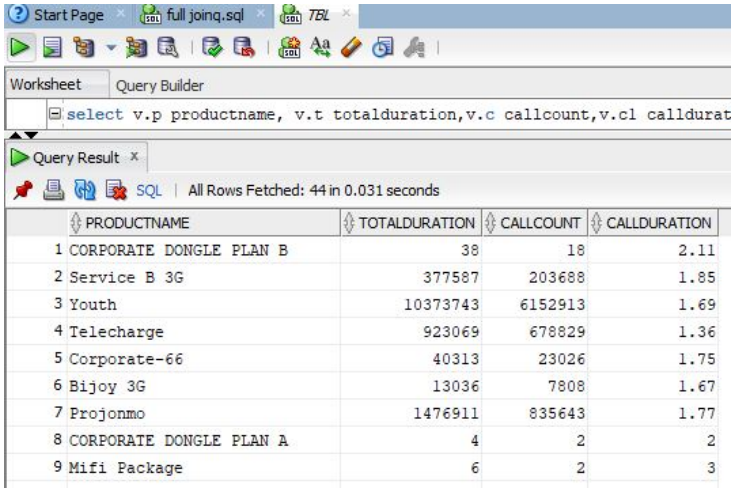
	STATIS_DATE	TOTALDURATION	CALLCOUNT	CALLDURATION
1	20171105	15025714	5975301	2.51
2	20171021	10809334	3899833	2.77
3	20171123	14309670	5475929	2.61
4	20171214	15104406	6012087	2.51
5	20171215	15834241	5753244	2.75
6	20171113	14787544	5713897	2.59
7	20171124	15635072	5330505	2.93
8	20171129	14661913	5422857	2.7
9	20171130	14706960	5851301	2.51

Figure 4.4: Day wise call duration

- Packages wise average call duration

  - **select**
    productname p
    round(sum(totalduration),2)totalduration
    round(sum(callcount),2) callcount,
    round(sum(totalduration)/ **(sum**(callcount)),2)callduration
    from TB_DW_CBS_REC_DAY
    group by productname;

Figure 4.5.



	PRODUCTNAME	TOTALDURATION	CALLCOUNT	CALLDURATION
1	CORPORATE DONGLE PLAN B	38	18	2.11
2	Service B 3G	377587	203688	1.85
3	Youth	10373743	6152913	1.69
4	Telecharge	923069	678829	1.36
5	Corporate-66	40313	23026	1.75
6	Bijoy 3G	13036	7808	1.67
7	Projonmo	1476911	835643	1.77
8	CORPORATE DONGLE PLAN A	4	2	2
9	Mifi Package	6	2	3

Figure 4.5: Packages wise call duration

4.9.2 Report on Subscriber wise voice revenue

- Subscribers base voice revenue

  - **select**
    chargingpartynumber,
    sum(acctualrevenue)
    from TB DW CBS REC DAY MS
    GROUP by CHARGINGPARTYNUMBER;

Figure 4.6.

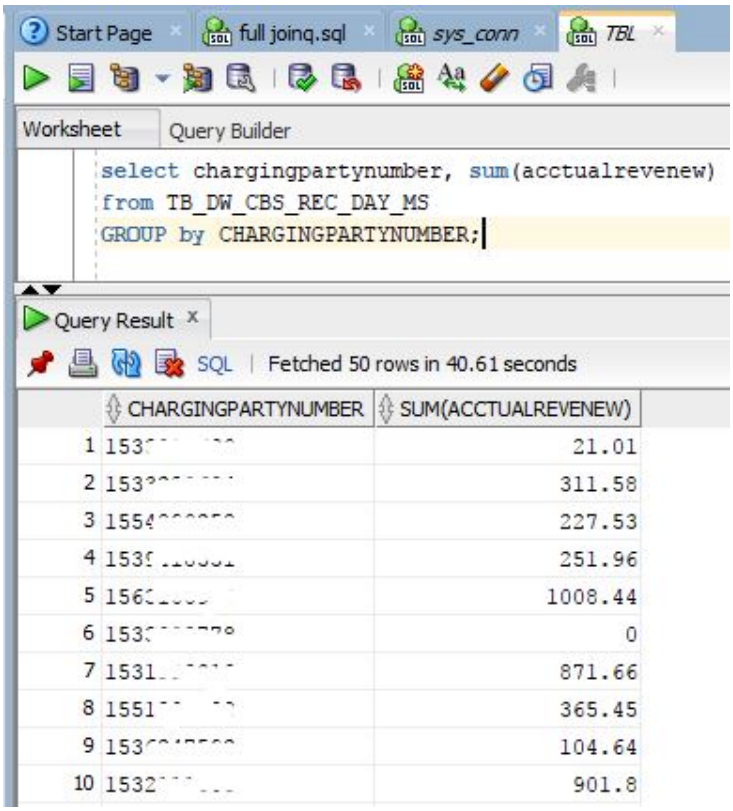


Figure 4.6: Voice revenue

4.9.3 Report on High Usages

- Based on Duration

  – **select**
  rownum,
  chargingpartynumber,
  totalduration
  from (**select**
  chargingpartynumber,
  totalduration

from TB_DW_CBS_REC_DAY_MS
group by chargingpartynumber,totalduration
order by totalduration **desc**);
Figure 4.7

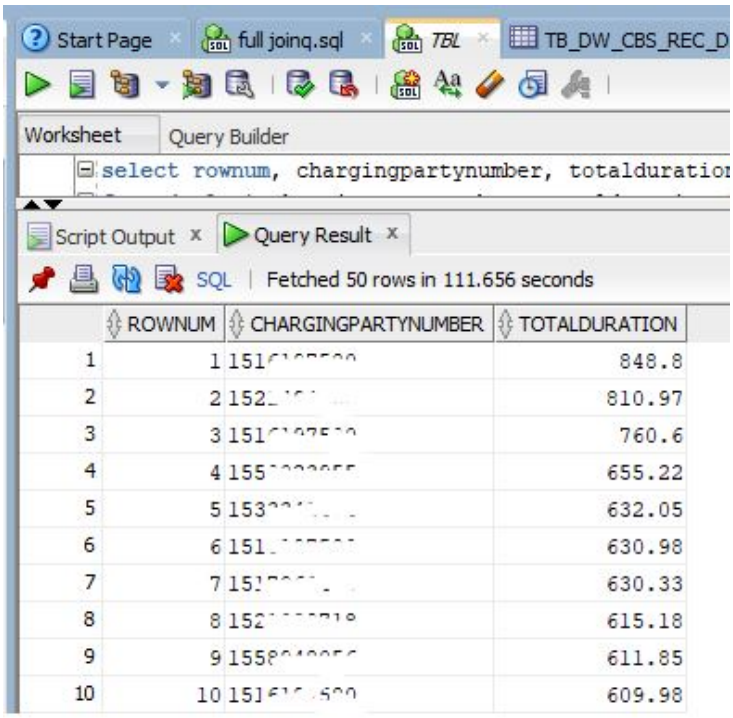


Figure 4.7: Based on Duration

- Based on Voice revenue

  – **select**
  rownum,
  chargingpartynumber,
  acctualrevenew
  from (select
  chargingpartynumber,
  acctualrevenew
  from TB_DW_CBS_REC_DAY_MS

Group by chargingpartynumber, acctualrevenew
order by acctualrevenew **desc**);
Figure 4.8.

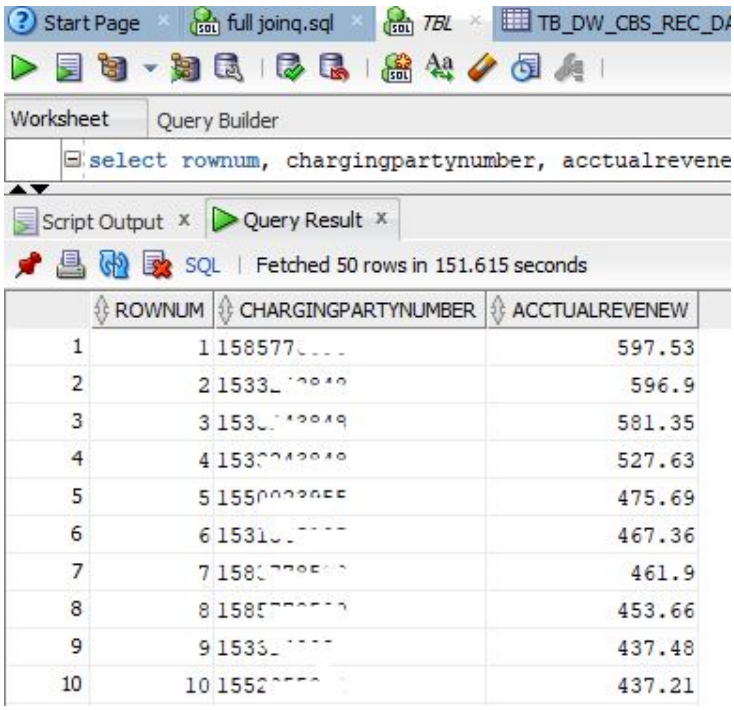


Figure 4.8: Based on Voice revenue

- Based on data revenue

  – **select**
  rownum,
  CHARGINGPARTYNUMBER,
  DATA_REVENUE
  from(**select**
  CHARGINGPARTYNUMBER,
  DATA_REVENUE
  from TB_DW_CBS_MON_DAY_MS
  where statis_date like ’201711

group by CHARGINGPARTYNUMBER,DATA_REVENUE
order by DATA_REVENUE **desc**);

Figure 4.9.

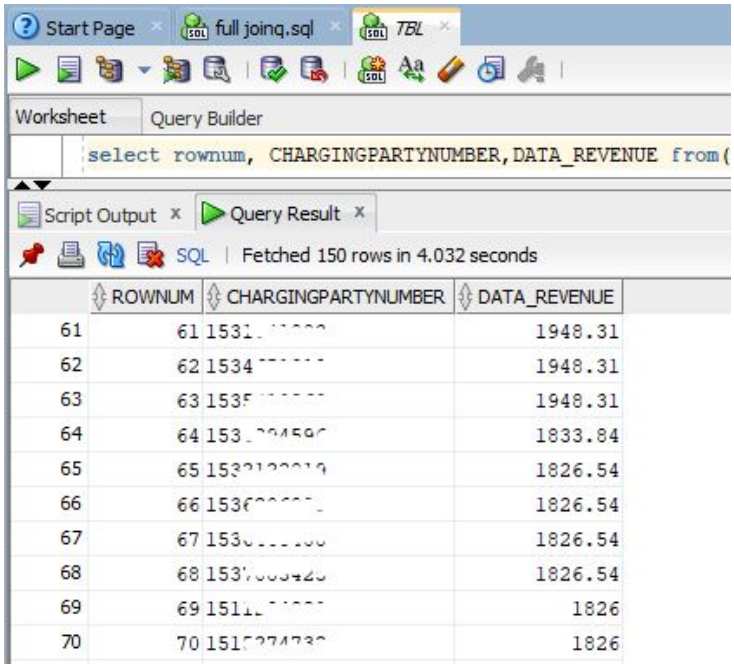


Figure 4.9: Based on data revenue

4.9.4 Report on Data Record

- Report on Daily total Data Revenue (Including Pay per use and Data Pack Revenue)

  – **select**
  m.statis_date,
  m.CHARGINGPARTYNUMBER , sum(nvl(m.data_revenue,0) + nvl(d.revenue_in_pay_pe
  + nvl(d.revenue_pay_per_use_post,0)) Total_data_revenue
  from TB_DW_CBS_MON_DAY_MS m
  full outer join
  TB_DW_CBS_DATA_DAY_MS d

on m.statis_date=d.statis_date
and m.CHARGINGPARTYNUMBER=d.CHARGINGPARTYNUMBER
where m.statis_date >='20171119'
and D.TOTAL_USAGE_MB >0
and M.DATA_REVENUE >0
group by M.STATIS_DATE,M.CHARGINGPARTYNUMBER ;

Figure 4.10.

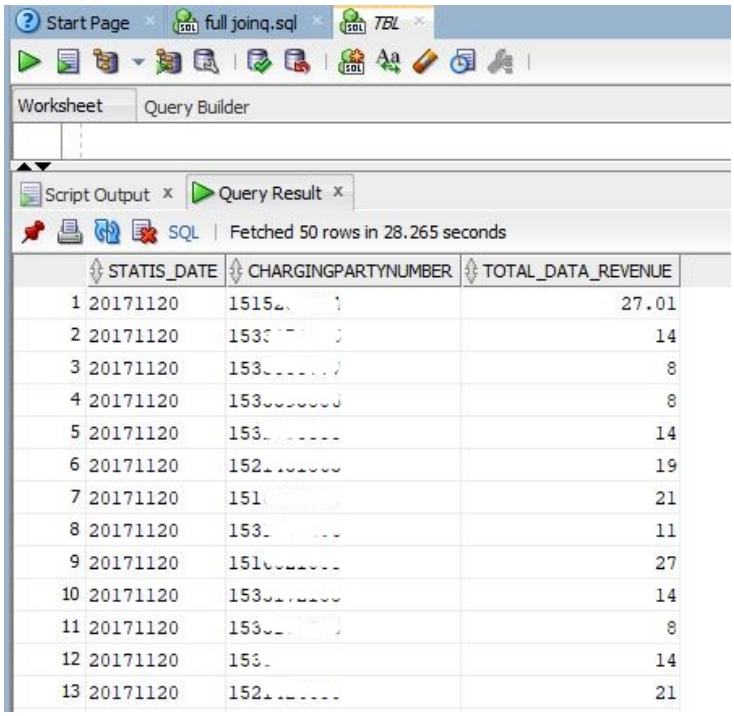


Figure 4.10: Data Revenue

- Report on Daily data pack revenue

  - **select**
    statis_date,
    data_revenue
    from TB_DW_CBS_MON_DAY_INFO1
    group by statis_date,data_revenue;

Figure 4.11.

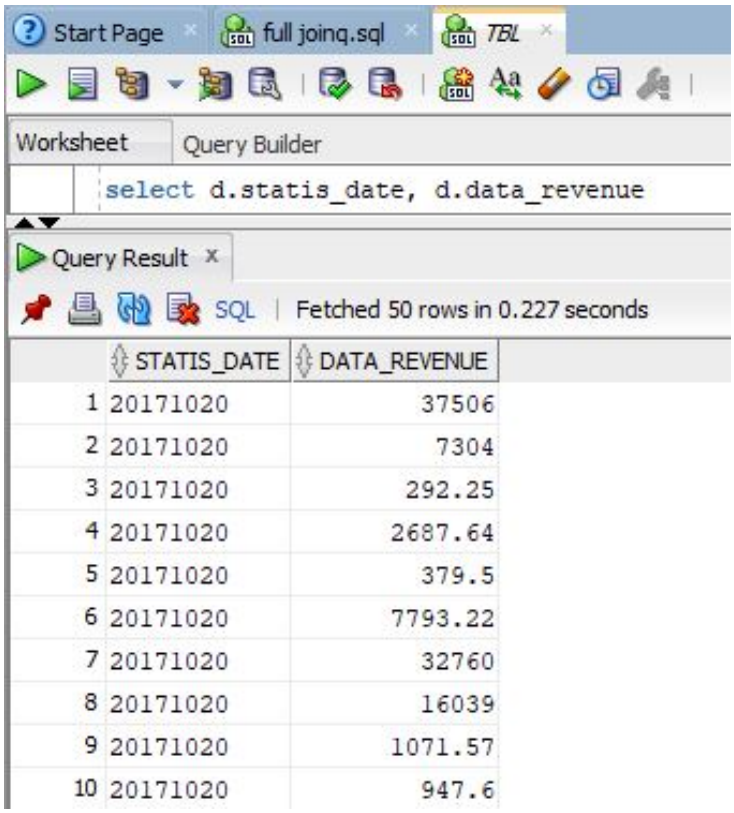


Figure 4.11: Daily data pack revenue

- Report on Data Package wise revenue

  - **select**
    d.productname,
    ,data_revenue
    from(select
    productname,
    data_revenue
    from TB_DW_CBS_MON_DAY_INFO1
    group by productname,data_revenue) d;

Figure 4.12.

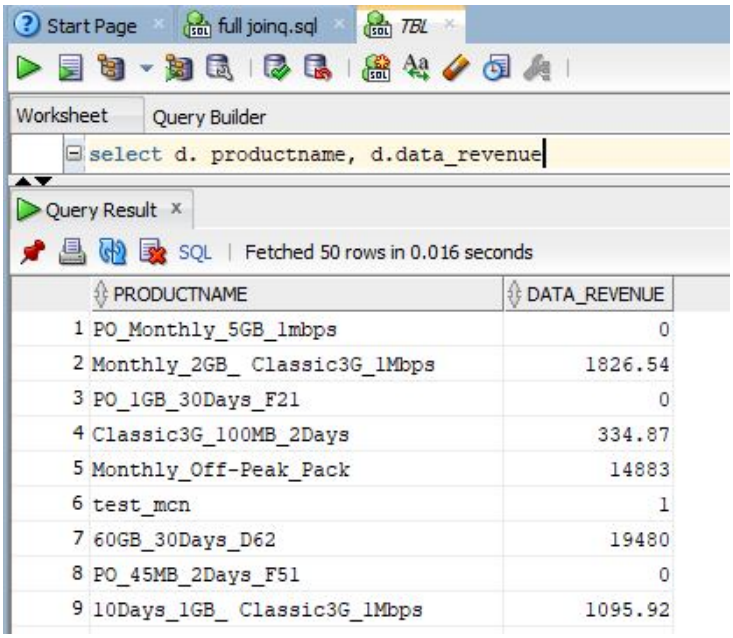
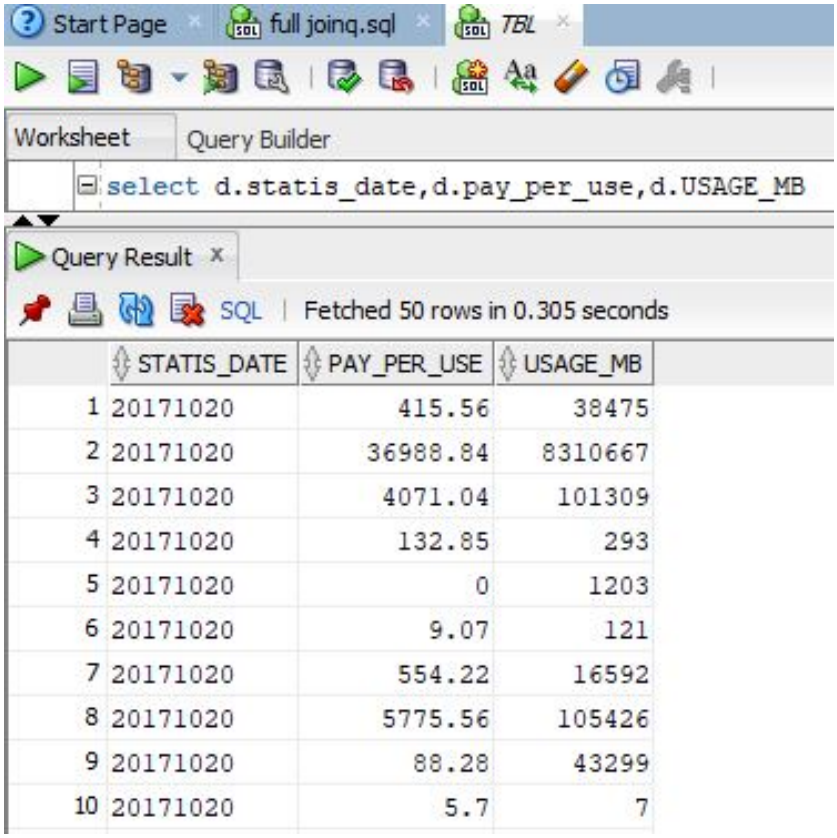


Figure 4.12: Data Package wise revenue

- Daily Report on Revenue from pay per use and and Consumed usages

  – **select**
  d.statis_date,
  d.pay_per_use,
  d.USAGEMB
  from(**select**
  statis_date,
  round(REVENUE_IN_PAY_PER_USE_PRE + REVENUE_PAY_PER_USE_POST,2)
  pay_peruse,
  TOTAL_USAGE_MB usage_mb
  from TB_DW_CBS_DATA_DAY
  group by statis_date,round(REVENUE_IN_PAY_PER_USE_PRE + REVENUE_PAY_PER_USE_POST,2),TOTAL_USAGE_MB)d; Figure 4.13.



	STATIS_DATE	PAY_PER_USE	USAGE_MB
1	20171020	415.56	38475
2	20171020	36988.84	8310667
3	20171020	4071.04	101309
4	20171020	132.85	293
5	20171020	0	1203
6	20171020	9.07	121
7	20171020	554.22	16592
8	20171020	5775.56	105426
9	20171020	88.28	43299
10	20171020	5.7	7

Figure 4.13: pay per use and and Consumed usages

4.9.5 Report on Recharge Record

- Daily average Recharge Report

  – **select**
  statis_date,
  round(avg(totalrecharge),2) totalrecharge
  from TB_DW_CBS_VOU_DAY1
  group by statis_date;

Figure 4.14.

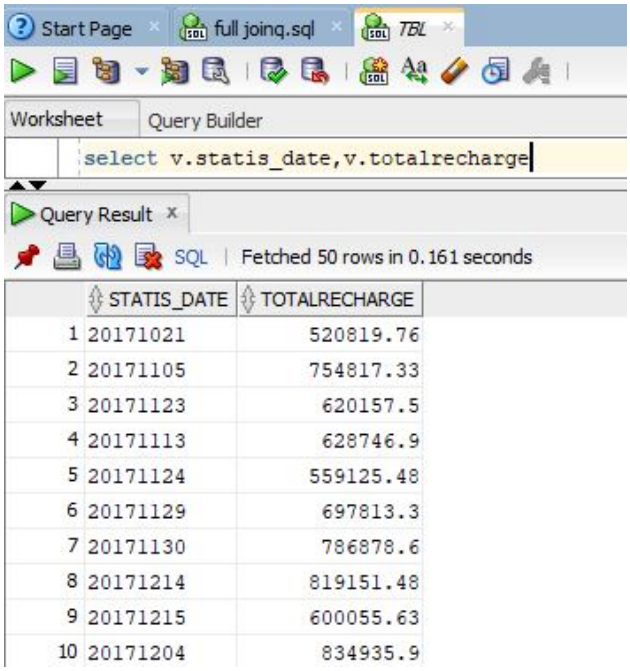


Figure 4.14: Daily Recharge Reports

- Package wise average Recharge Report

  – **select**
  productname,
  round(avg(totalrecharge),2) totalrecharge

from TB_DW_CBS_VOU_DAY1
group by productname;

Figure 4.15.

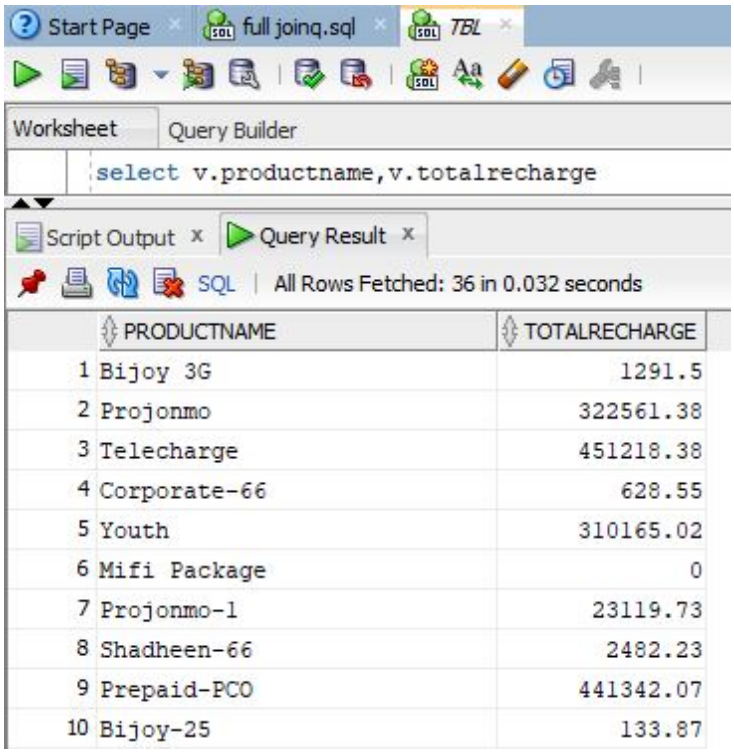


Figure 4.15: Package wise Recharge Report

4.10 Query Summery

After analysis queries I found some important information for them.

- Taletalk subscribers call duration average 2.50 minute or up.
- Daily Teletalk data subscription 1 and more lac
- Taletalk subscribers recharge amount upto 1 thousand and more

4.11 Data Package Analysis

I analysis their data package revenue,unique and total subscribers for approximate 2month.

- Day based Data Revenue (Unit of Y-axis is in Million) Figure 4.16.

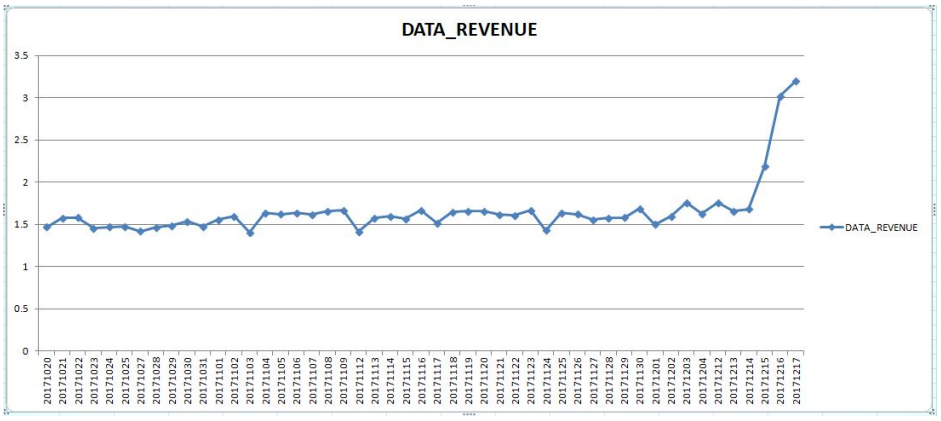


Figure 4.16: Day based Data Revenue

- Package based Data Revenue (Unit of Y-axis is in Million) Figure 4.17.

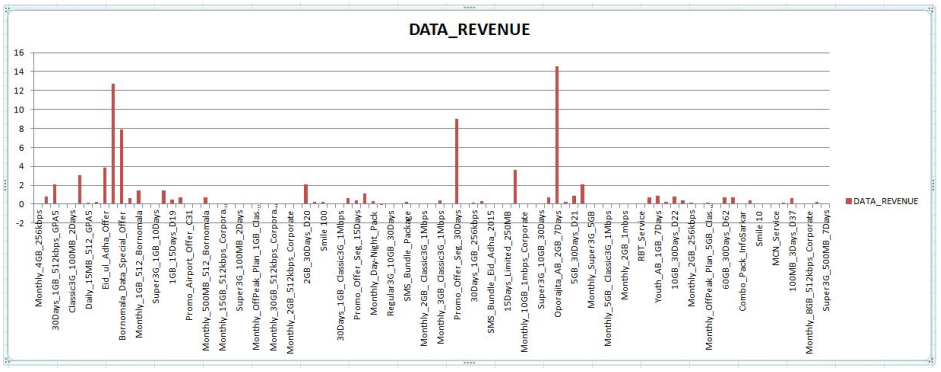


Figure 4.17: Package based Data Revenue

- Data Package based Unique and Total Subscribers (Unit of Y-axis is in Million) Figure 4.18.

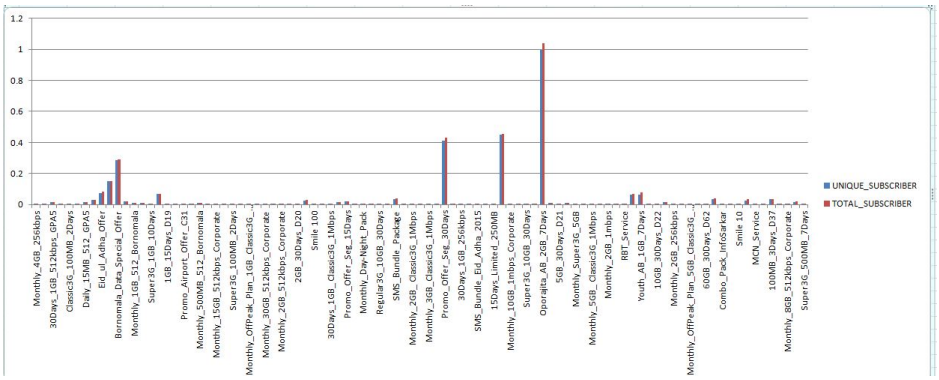


Figure 4.18: Data Package based Unique and Total Subscribers

4.12 Other Relevant Features

Sometimes for working purpose I need database other features.

*4.12.1 Sql*Loader*

SQL*Loader is a high-speed data loading utility that loads data from external files into tables in an Oracle database. It provides database administrators with the fast performance and flexibility required to get load jobs conducted as quickly and efficiently as possible. Some time I used this process for data load. Figure 4.19.

Figure 4.19: Load data from Sql*Loader

4.12.2 Data Spooling

SQL loader is a tool to load data into a database, not to get data out.I can change the query to get data in the exact format I want and then use SPOOL, which is a SQLPLUS command to print data to a file. Example of Spool command: set headsep off, set feedback off, SET PAGESIZE 0, SET LINESIZE 5000, set trimspool on, spool ”H:/ Teletalk/ teledata.txt”’ select STATISDATE concatenate CHARGINGPARTYNUMBER concatenate RECHARGEFORPOSTPAID from LBIDW BGD TELETALK.TB DW CBS VOU DAY where statisdate =’20171023’ and rownum¡=5000; spool off;

Example of Data Spooling Figure 4.20.

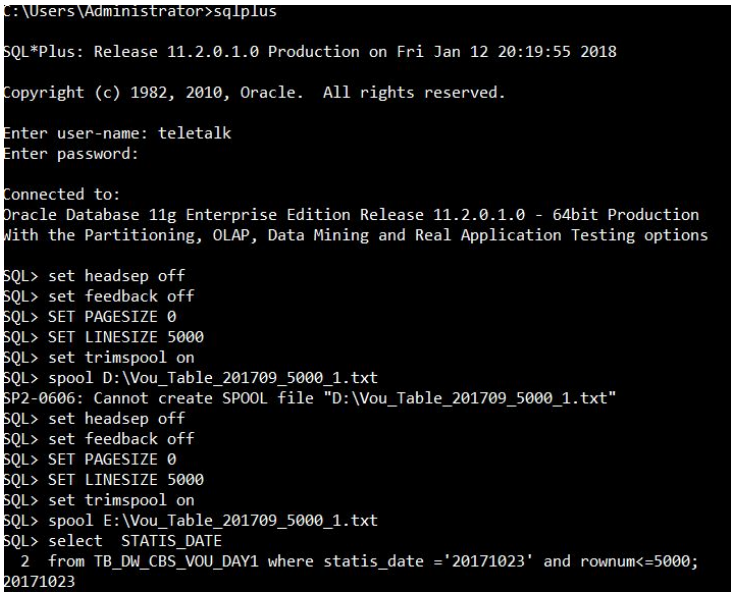


Figure 4.20: Data Spooling

4.12.3 Export and Import

Oracle Data Pump is the replacement for the original Export and Import utilities.Available starting in Oracle Database 10g, Oracle Data Pump enables very high-speedmovement of data and metadata from one database to another. The

Data Pump Export and Import utilities have a similar look and feel to the original utilities, but they are much more efficient and give you greater control and managementof your import and export jobs.

1. Export command : Firstly creating and directory and set read write permission for directory. Expdp username : scott userpassword : tiger DIRECTORYNAME=dpumpdir1 dumpfilename=scott.dmp logfilename=expdpscott.log. Figure 4.21.

Figure 4.21: Data exported

2. Import Command :impdp username: scott userpassword: tiger DIRECTORYNAME=dpumpdir1 dumpfilename=scott.dmp TABLESNAME=scott.emp logfilename=impdpemptotltk.log REMAP SCHEMANAME=scott:teletalk TABLE EXISTS ACTION=APPEND Figure 4.22.

Figure 4.22: Data imported

5 Conclusion

The report represents there all life experience that I had during my internship period as a IT personnel. This experience has challenged me to continually learn about myself and my interactions with others. The internship gives me the opportunity to be confident with the techniques which I will be able to apply in my future profession .I learned from my internship that how to deal with different person. I hope that, this experience will help me in future in my job career. The things that I learned from the experience will always be with me and will help me to go forward in my professional life.

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