|  |
| --- |
| Account |
| ACode\_sk  Opening Date  Balance  AccountType |

***LAB 5 PART 1***

|  |
| --- |
| Customer |
| cCode\_sk  Name  Address  Phone  BDay  Gender  Salary |

|  |
| --- |
| Transaction |
| Tcode\_sk  Type  Amount  Date |

|  |
| --- |
| FACT |
| ACode\_sk  CCode\_sk  Tcode\_sk  BankID\_sk  #Transactions |

|  |
| --- |
| Bank |
| BankID\_sk BankName  BranchName  Address  RegionName  Country |

***Grain***

The fact table contain Acode\_sk which is a surrogate key to the account dimension, CCode\_sk is a surrogate key to customer dimention, Tcode\_sk is a surrogate key to the transaction dimention, BankID\_sk is a surrogate key to the bank dimention and #Transactions is a number of transactions.

***Facts***

#Transactions is used to count the total amount of all the transactions. It is used to support the queries when asked to caount the number of transactiosn. It will be pre computing numbe of Tcode\_sk in the Transaction dimention.

**Dimensions**

I’ve merged 3 tables (BRANNCH,REGION,BANK) into one dimetion(Bank) to make fact table smaller and more efficient. It contains ann the information about the bank. Customer dimention takes care of the customer details, Account dimention holds inforamtion about the account and Transaction dimention contains inforamtion about the transactions.

***2. Using your model, write an SQL query to get the total amount of all the transactions over students accounts for each branch in 2009***

SELECT COUNT(Transactions) ,Bank.BranchName FROM Fact f JOIN Aaacount a on f.ACode\_sk = a. ACode\_sk JOIN Bank b on f.BankID\_sk = b.BankID\_sk JOIN Transaction t on f.Tcode\_sk = t.Tcode\_sk WHERE a.AccountType = ‘Student’ AND t.Date BETWEEN ’01-01-2009’ AND ’31-12-2009’;

***LAB 5 PART 2***

Chelsea Ticket booking system.

|  |
| --- |
| PAYMENT |
| Payment\_ID\_SK  Payment\_Type |

|  |
| --- |
| DATE |
| Date |

|  |
| --- |
| CUSTOMER |
| Customer\_ID\_SK  CustomerType  Customer\_Name  Customer\_Email  Customer\_Phone |

|  |
| --- |
| COMPETITION |
| Comp\_ID\_SK  Comp\_Name  Comp\_Description |

|  |
| --- |
| LOCATION |
| Location\_ID\_SK  Location\_Name  City\_Name  Country\_Name |

|  |
| --- |
| MATCH |
| Match\_ID\_SK  Team\_A  Team\_B |

|  |
| --- |
| FACT |
| Customer\_ID\_SK  Payment\_ID\_SK  Location\_ID\_SK  Ticket\_ID\_SK  Match\_ID\_SK  Comp\_ID\_SK  Date |
| #Of\_Tickest\_Sold  Total\_Amout\_Made |

|  |
| --- |
| TICKETS |
| Ticket\_ID\_SK  Ticket\_Type  Ticket\_Price  Seat\_no |

My business model is Chelsea FC Ticket booking system. It can calculate the number of tickets sold and total revenue. There can be different Customers such as members, non-members and students. Payment can be done through Credit Card, Paypall or Bank Transfer. Location would be the name of the stadium, city where the stadium is and the country as some matches might be played in different countries. Match dimension hold the names of 2 teams playing and Competition dimension what king of competition could it be eg. Champions League or Premier League. Tickets can be standard or premium, the price depends on the type of the ticket.

***Get total amount of premium tickets bought for Champions league games by each customer type in 2012.***

SELECT COUNT(Of\_Tickest\_Sold), Customer. CustomerType FROEM Fact f JOIN Tickets t on f.Ticket\_ID\_SK = t.Ticket\_ID\_SK JOIN Competition c on f. Comp\_ID\_SK = c.Comp\_ID\_SK JOIN Customer cu on f.Customer\_ID\_SK = cu.Customer\_ID\_SK WHERE t.Ticket\_Type = ‘premium’ AND c.Comp\_Name = ‘Champions league’ AND f.Date BETWEEN ’01-01-2012’ AND ’31-12-2012’;

***Get total amount of revenue made for home premier league games in season 2015/2016.***

SELECT COUNT(Total\_Amout\_Made) FROM Fact f JOIN Location l on f.Location\_ID\_SK = l.Location\_ID\_SK JOIN Competition c on f.Comp\_ID\_SK = c.Comp\_ID\_SK WHERE c.Comp\_Name = ‘Premier League’ AND l.Location\_name = ‘Stamford Bridge’ and f.Date BETWEEN ’14-08-2015’ AND ’31-05-2016’;