K. J. Somaiya College of Engineering, Mumbai-77

(Autonomous College Affiliated to University of Mumbai)

Internship Report

Railway Ticket Booking System Based on C Programming under embedded systems.

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Department of Science and Humanities

Acknowledgement

We would like to thank K.J. Somaiya College of Engineering for giving us this in-house internship. We express our gratitude towards Professor Sandeep Sainkar for giving us this opportunity and his valuable guidance. We would like to thank Professor Shilpa Vatkar for allowing us to perform internship under embedded systems based on C Programming and helping us to select the related topics and projects .We would also thank EXTC HOD Professor AmeyNaik and Principal Dr. ShubhaPandit for creating such opportunities. Each of us have studied the concept through various information sources and tried our best to make this internship successful.

<u>Students involved</u>:

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1.Aim:

- ✓ To learn more about embedded systems.
- ✓ To learn to code based on C Programming Language based on flowcharts and algorithms.
- ✓ To learn how to work on mini projects and debug it.
- ✓ To learn how to divide projects in small modules and work on it.

2. Abstract

The Indian Railways (IR) carries about 5.5 lakhs passengers in reserved accommodation every day. The Passenger Reservation System (PRS) facilates the booking and cancellation of tickets from any of the 4000 terminals (i.e. PRS booking window all over the countries). These tickets can be booked or cancelled for journeys commencing in any part of India and ending in any other part, with travel time as long as 72hours and distance upto several thousand kilometers. In the given project we will be developing a user-friendly portal which will help users to log in to their personalized accounts and sign in were they can make new account by giving there phone number ,user name and there password based on their choice and find train details, book and get display of final ticket and A program to book a railway ticket which can allow user to input date of travel, starting and ending location of the journey, selecting the different trains available with the preferred type of the class they want including the passenger details is to be created. With the help of railway reservation system people can book their tickets online through internet, sitting in their home by a single click of mouse.

3.Introduction

In these project we have made a program based on embedded system in C programming on topic Railway Reservation System. In these project first the user have to log in using username: testcase1

And password:password created by us as a default account for log in as a test case for us . And a new user can click on sign up and give their user name, password ,phone number and set up a new account.

Now the user can book their ticket from the personalized account safe form threats. It is a user-friendly program. Now you have to give month of travel as asked by the programmer and after giving that we have to give date of travel and then select

boarding station and then destination station as per our need. And after that we get different options of trains matching our choices. After selecting desired train we have to select the class in which we have to go from available options which are given along with their prices. After this we have to select no of passengers and give their details as asked by program. After these your final ticket get displayed along with the booking status and all the necessary details given by you. In this program all the test cases are considered and we have tried to remove all the bugs and tried to make a user friendly portal.

4. Input Specifications

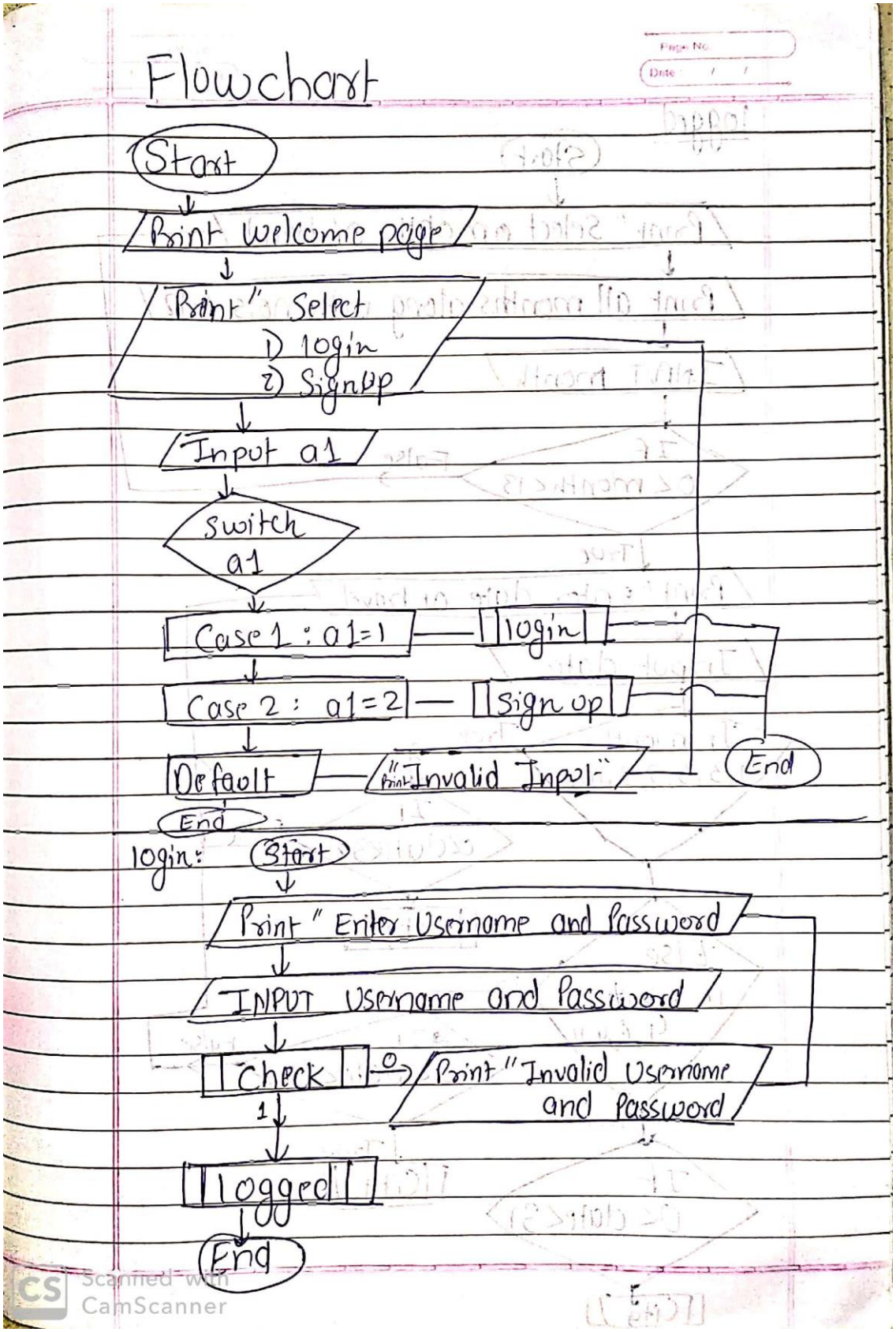
1. Will the user login or sign up?

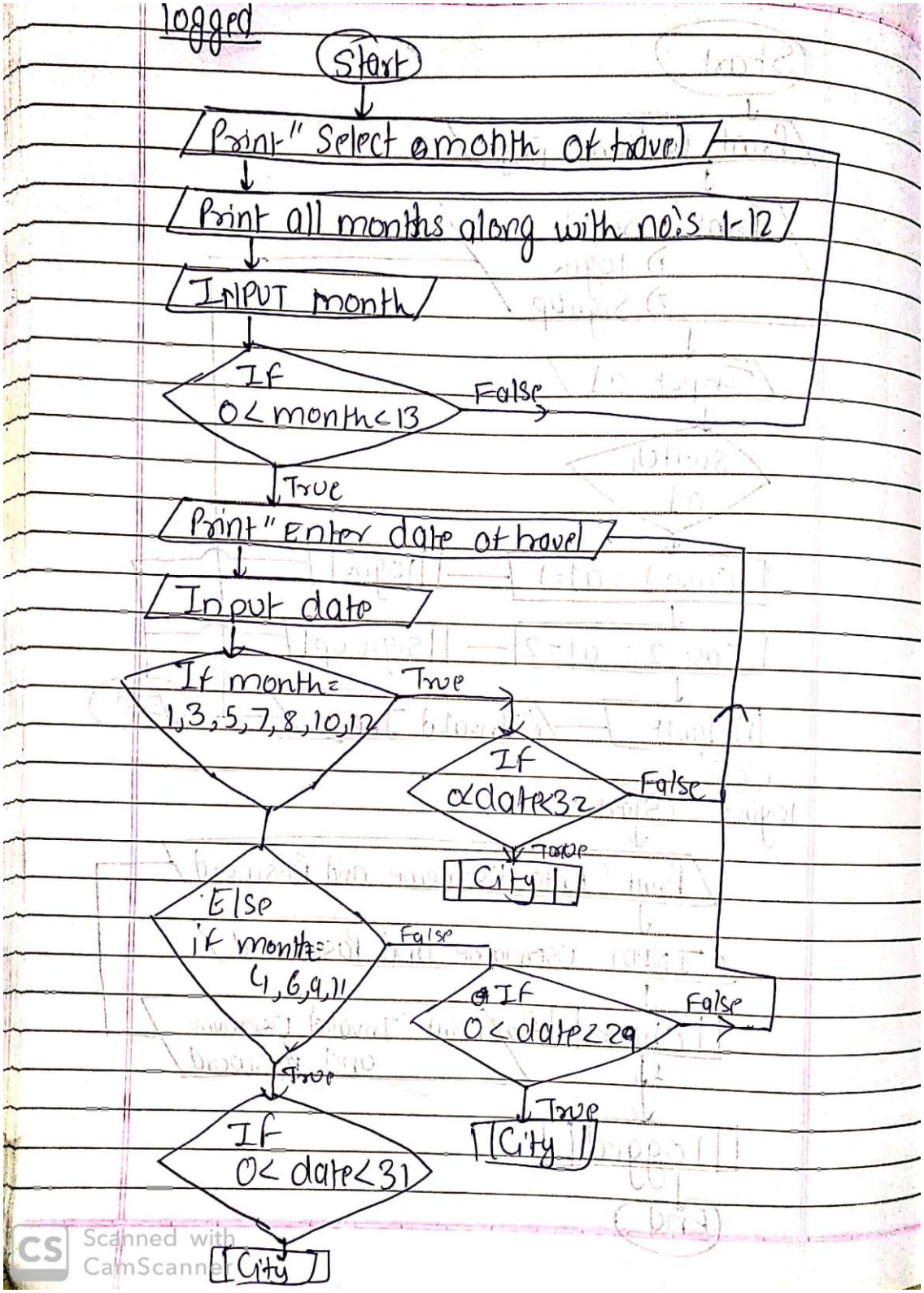
2.What will be the date of travel?
3.What will be the start and end locations available?
4.What will be the number of trains available for ticket booking?
5. Will the cost vary for different locations? Or Will it be the same for all?
6.How many passengers will travel?

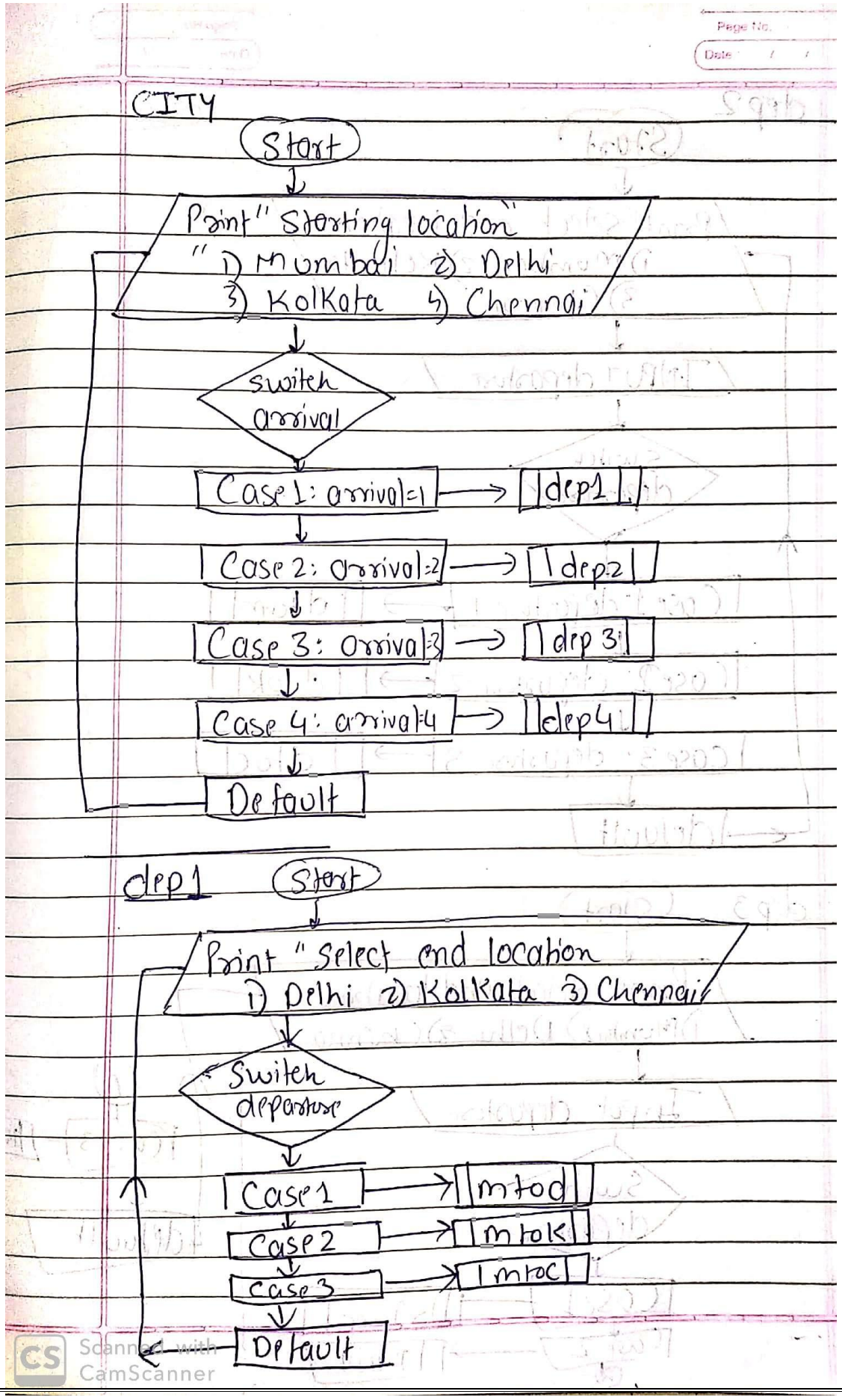
5.Output Specifications

1.What format is the Boarding Date Displayed as?
2.What way is the passenger details displayed?
3.How is the Seat Number displayed?
4.How is the cost of the ticket displayed?
5. Is it necessary to display the train name?
6. Where should the class be displayed?
7. What details of the passenger must be displayed?

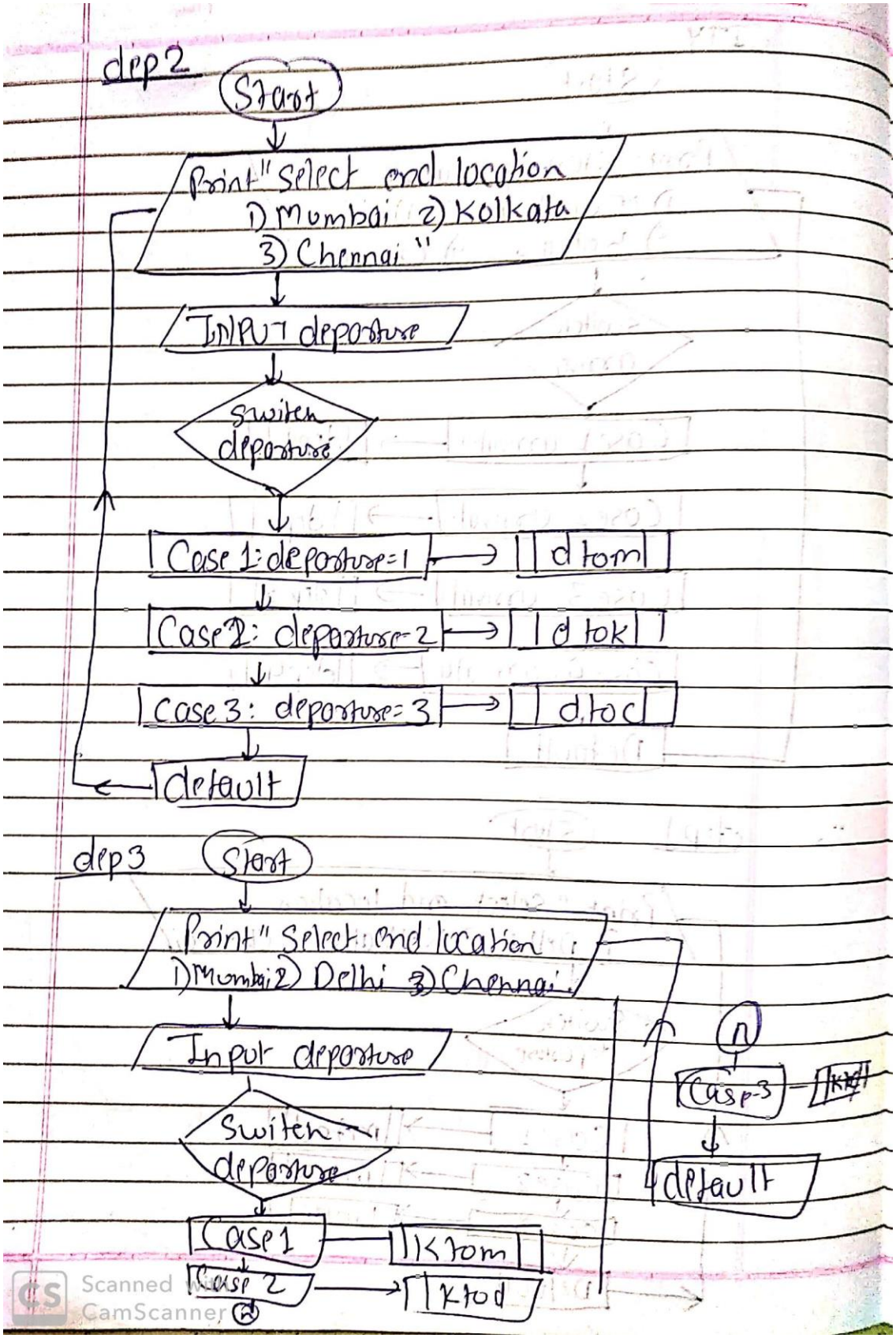
5.Flowchart

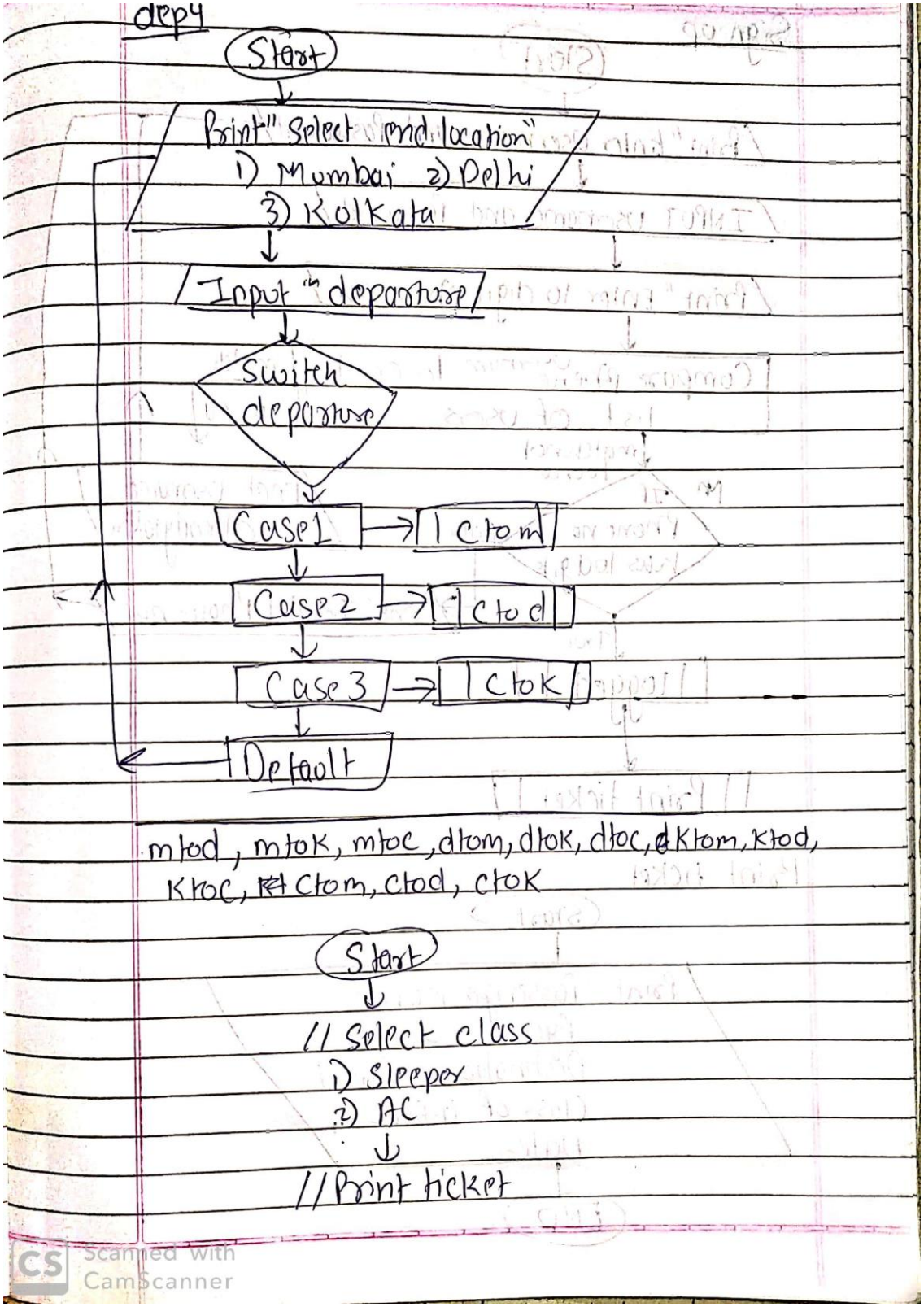

Flowchart
Start
Print welcome page
Print " Select
1) login
2) SignUp
Input a1
switch
a1
Case 1 : a1=1
login
Case 2 : a1=2
Sign up
Default
Print "Invalid Input"
End
End
login:
Start
Print " Enter Username and Password
INPUT Username and Password
Check
0
Print "Invalid Username
and Password
1
Logged
End
Scanned with
CamScanner

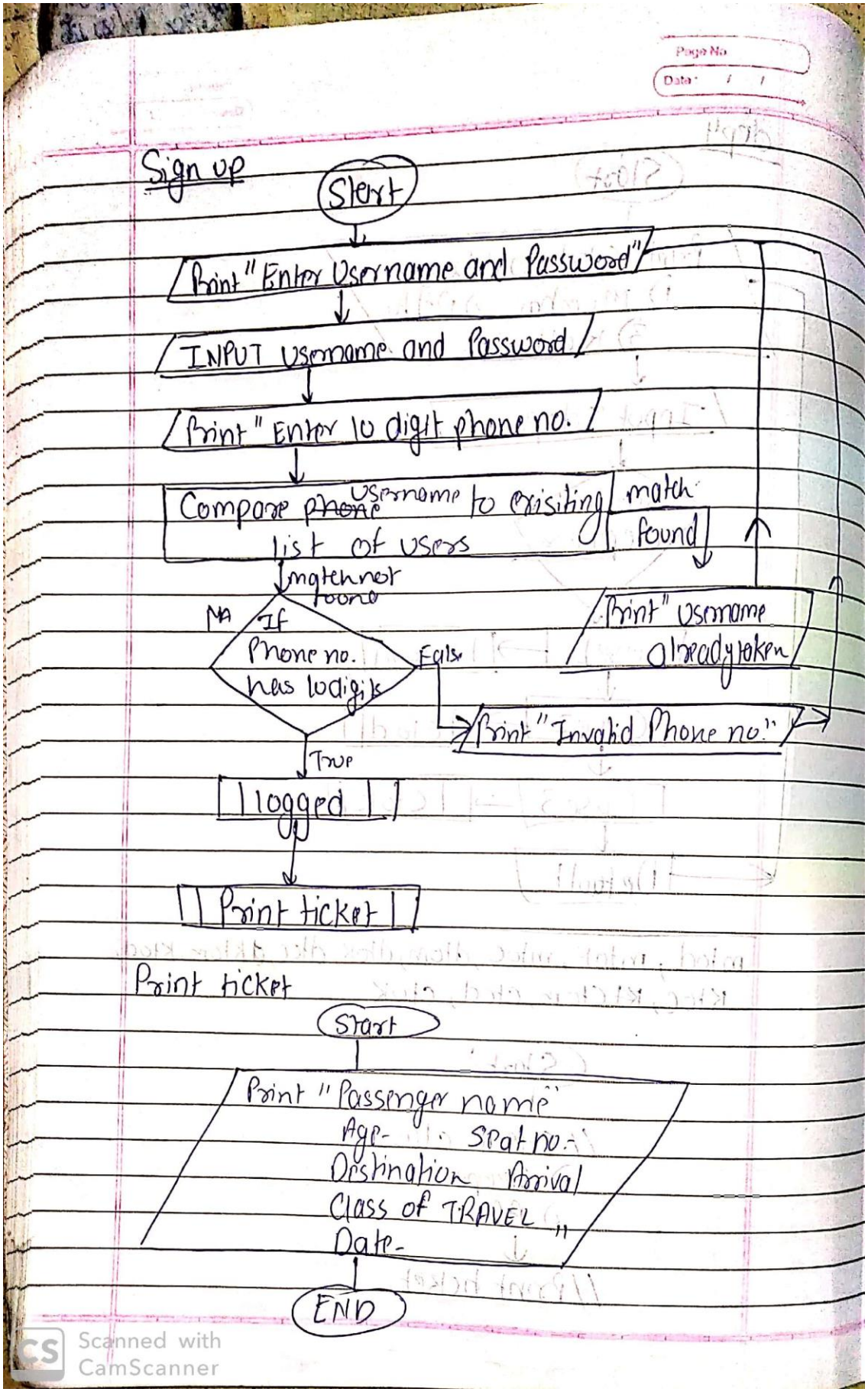

logged
Start
Print " Select a month of travel"
Print all months along with no's 1-12
INPUT month
If 0< month<13
False
True
Print " Enter date of travel
Input date
If month= 1,3,5,7,8,10,12
True
If 0<date<32
False
True
City
Else if month= 4,6,9,11
False
If 0< date<29
False
True
City
If 0< date<31
City
Scanned with CamScanner



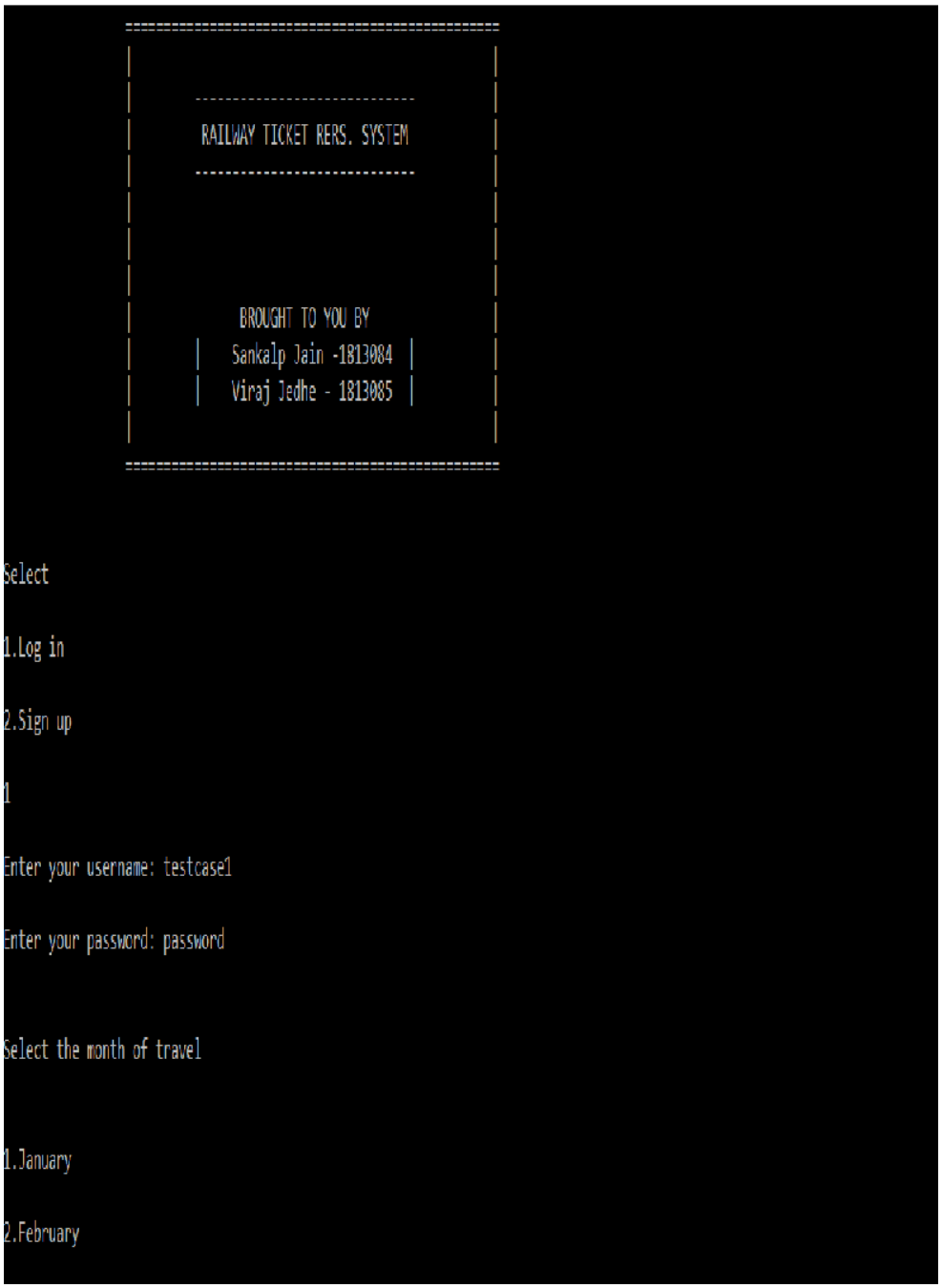
Scanned with CamScanner

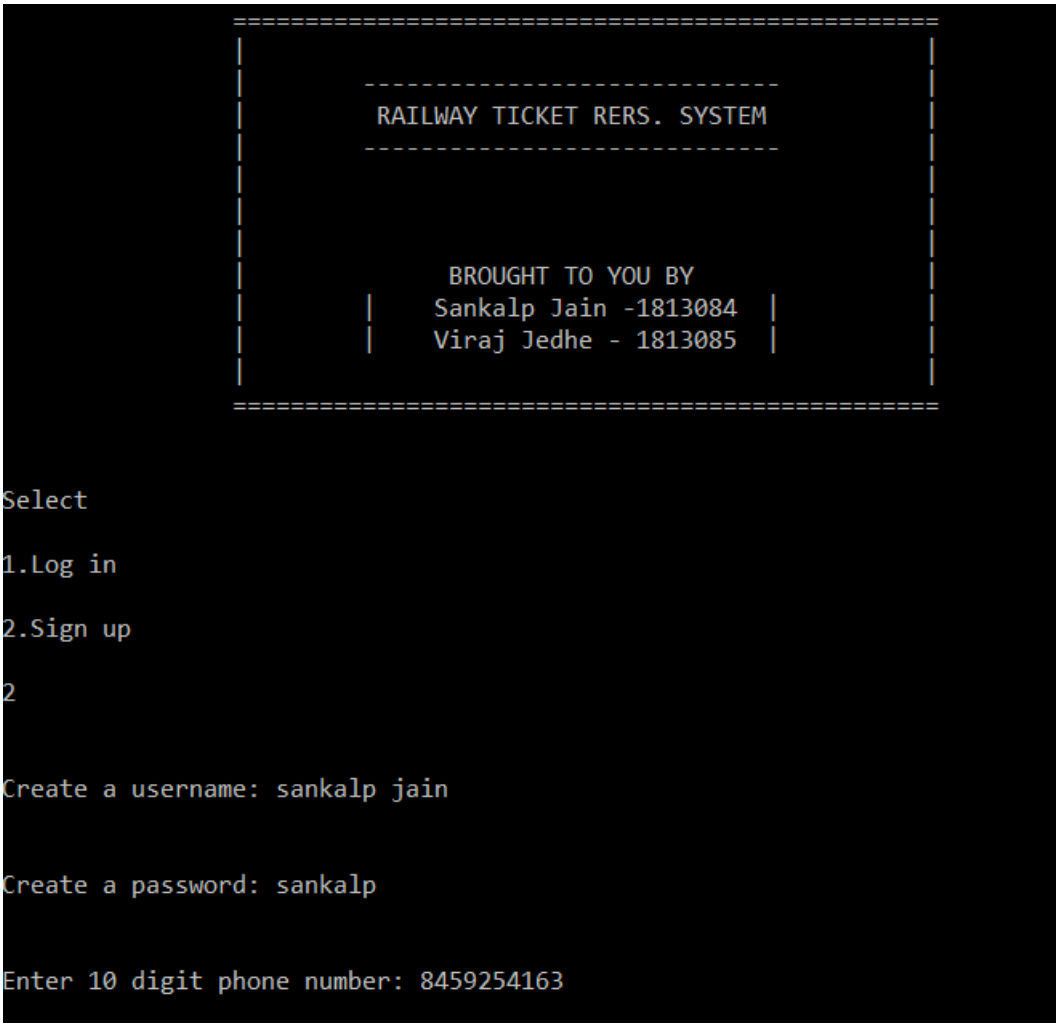

dep2
Start
Print" select end location
1) Mumbai 2) Kolkata
3) Chennai "
INPUT departure
Switch departure
Case 1: departure=1
d tom
Case 2: departure=2
d tok
case 3: departure=3
d.toc
default
dep3
Start
Print" Select end location
1) Mumbai 2) Delhi 3) Chennai
Input departure
Switch departure
case 1
Ktom
Case 2
Ktod
Case 3
default


dep4
Start
Print" Select and location"
1) Mumbai 2) Delhi
3) Kolkata
Input "departure"
Switch departure
Case1
1 ctom
Case2
1 ctod
Case3
1 ctok
Default
mtod, mtok, mtoc, dtom, dtok, dtoc, dKtom, Ktod,
Ktoc, Ktom, ctod, ctok
Start
// Select class
1) Sleeper
2) AC
// Print ticket
Scanned with CamScanner


Page No.
Date
Sign up
Start
Print "Enter Username and Password"
INPUT Username and Password
Print "Enter 10 digit phone no.
Compare Username to existing list of users
match found
Print "Username already taken
Username not found
If Phone no. has 10 digits
False
Print "Invalid Phone no."
True
logged
Print ticket
Print ticket
Start
Print "Passenger name
Age- Seat no.-
Destination Arrival
Class of TRAVEL
Date-
END
Scanned with CamScanner

6.Code Screenshots and Snippets:




RAILWAY TICKET RERS. SYSTEM
BROUGHT TO YOU BY
Sankalp Jain -1813084
Viraj Jedhe - 1813085
Select
1.Log in
2.Sign up
2
Create a username: sankalp jain
Create a password: sankalp
Enter 10 digit phone number: 8459254163

```
Enter your password: password

Select the month of travel

1.January
2.February
3.March
4.April
5.May
6.June
7.July
8.August
9.September
10.October
11.November
12.December
```

```
Enter the date of travel: 1

Select starting location:

1.Mumbai

2.Delhi

3.Kolkata

4.Chennai

1

Select end location:

1.Delhi

2.Kolkata

3.Chennai

1

List of available trains:

1.Mumbai Rajdhani

2.Nzm Duronto Exp

1


1.Sleeper - Not available

2.AC - 2700

2
```

```
================================================


Train Name: Mumbai Rajdhani

Boarding Date: 1 / 1 / 2019

Class: AC

Ticket Charge: 5400

Booking Status: Confirmed

Passenger/s Details :

Passenger Name : Sankalp Jain

Passenger Age : 19

Seat Number : 15

Passenger Name : Viraj Jedhe

Passenger Age : 19

Seat Number : 16

================================================
```

7.Conclusion:

From this project we learn to code mini projects by dividing into small modules . We learn to debug it .We learn to code for competitions like hackathon. It helps us to code in competitive manner. And it also increases our coding speed .It makes us superior over other in coding .It is necessary in todays IT world and we can't avoid it. We also learn the use of embedded

systems in our daily life .We also learn in better way in project based studies

than theoretical studies. We also learn the use of array, functions, switch loop ,for loop ,if else loop ,modularity in program and c programming in better way.

8.References:

1. E. Balagurusamy Programming in ANSI C McGraw-Hill Education, India 7 th Edition, 2016

2. Dey P. and Ghosh M. Structured Programming Approach Oxford University Press, India 1 st Edition, 2016

3. Kanetkar Y. Let Us C BPB Publications, India 15th Edition, 2016