Flight Reservation System

By-
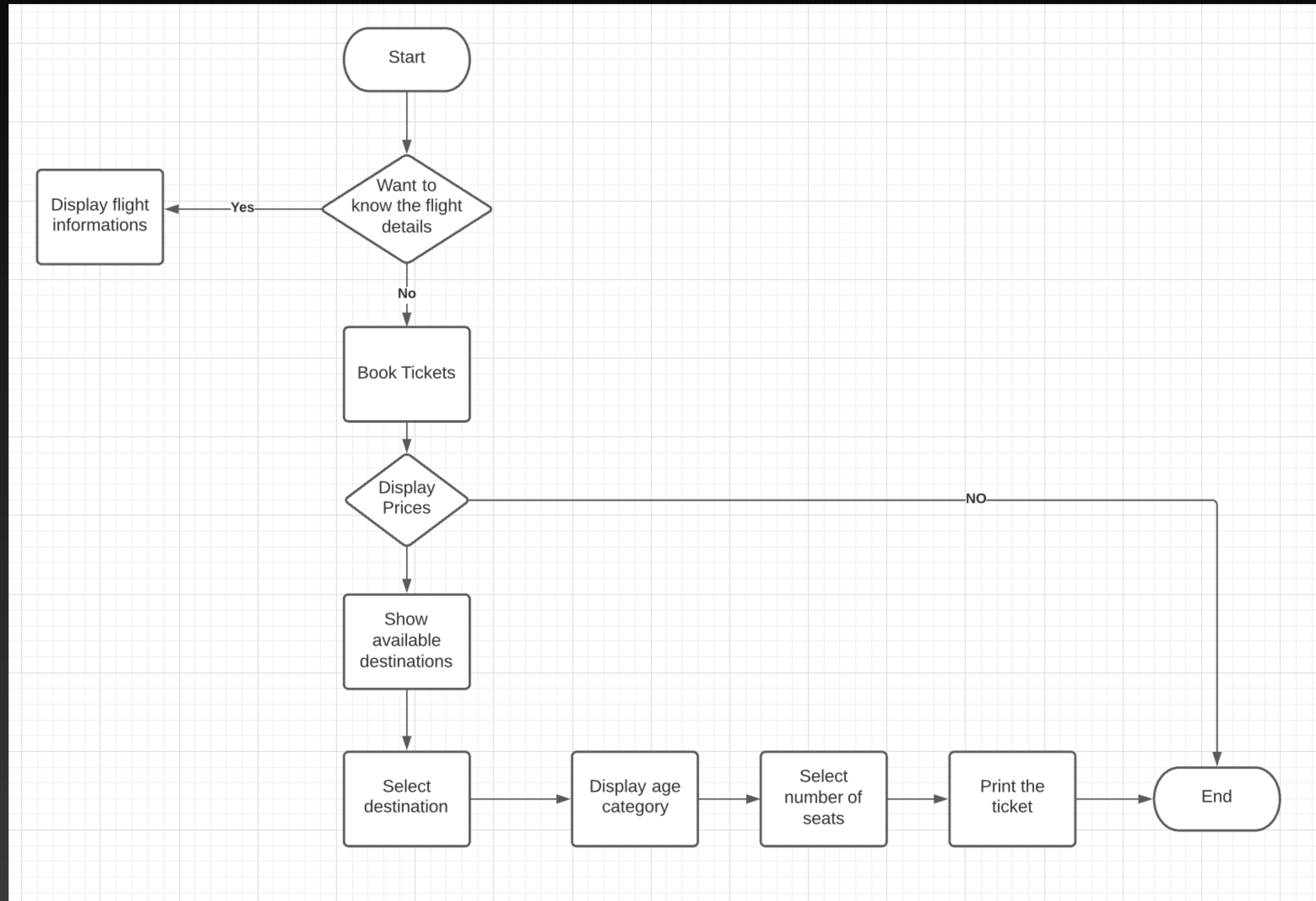Kartik Nahta 19BCE2009
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Abstract

With the modernisation, the flight culture is increasing day by day. Everyone prefers to go to and fro destinations in a flight rather than any other mode of transportation, Since it is the fastest mode of transportation at affordable rates. With the increase in the demand for the flight culture the possibility of the error and wastage of time also increases. Due to limited amount of seats available it leads to a lot of wastage of time. This has led to long queues and waiting time. In this project we are designing , developing and testing an assembly language code program to be used for a flight reservation generally referred as flight reservation system. This software is built on 8086 and hence it has very little to no need of specialised hardware and can perform tasks very quickly and accurately. Such a system is portable lightweight and easy to mass-produce thus having a huge scope in these modern times.
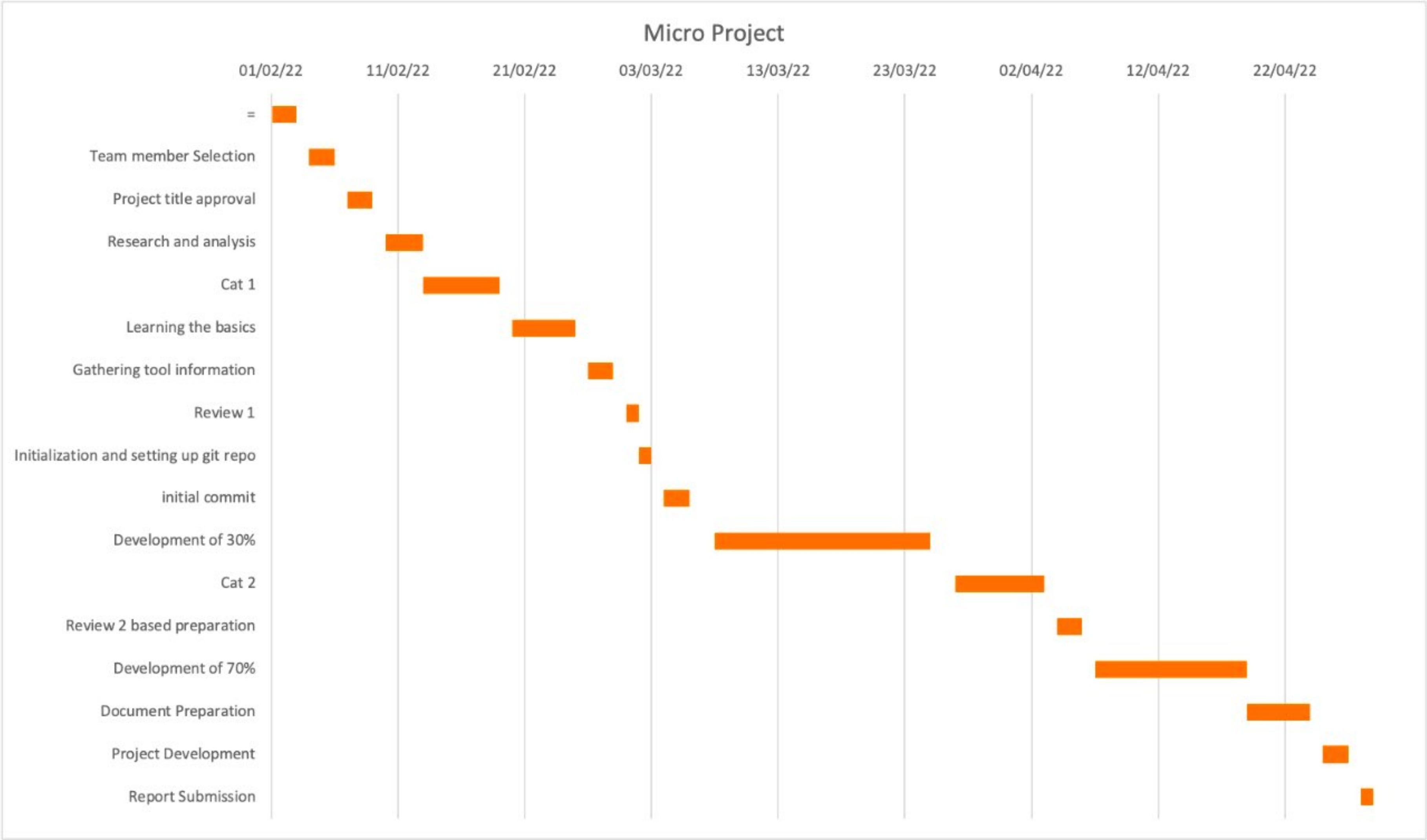
Aim & Objective

This project is aimed at developing an online ticket booking system for Flight. This application will automate the reservation of tickets and Enquiries about availability of the tickets based on the age group and choice of respective genres. One of the main purposes of our system is to reduce the number of staff in the ticket box. So, most of the job is done by the system automatically.

Flow Chart

Work Flow

Micro Project

Task	Timeline
=	01/02/22
Team member Selection	
Project title approval	
Research and analysis	
Cat 1	
Learning the basics	
Gathering tool information	
Review 1	
Initialization and setting up git repo	
initial commit	
Development of 30%	
Cat 2	
Review 2 based preparation	
Development of 70%	
Document Preparation	
Project Development	
Report Submission	

Plan Of Execution

Task	Start Date	End date	Duration
project start off	2/1/2022	2/3/2022	2
Team member Selection	2/4/2022	2/6/2022	2
Project title approval	2/7/2022	2/9/2022	2
Research and analysis	2/10/2022	2/13/2022	3
Cat 1	2/13/2022	2/19/2022	6
Learning the basics	2/20/2022	2/25/2022	5
Gathering tool information	2/26/2022	2/28/2022	2
Review 1	3/1/2022	3/2/2022	1
Initialization and setting up git repo	3/2/2022	3/3/2022	1
initial commit	3/4/2022	3/6/2022	2
Development of 50%	3/8/2022	3/25/2022	17
Cat 2	3/27/2022	4/3/2022	7
Review 2 based preparation	4/4/2022	4/6/2022	2
Development of 90%	4/7/2022	4/19/2022	12
Document Preparation	4/19/2022	4/24/2022	5
Project Development	4/25/2022	4/27/2022	2
Report Submission	4/28/2022	4/29/2022	1

System Requirement

- Software Requirement
    Operating System: Windows 7 and above
    EMU8086 for Building the entire system using the 8086 ALP program.

    - Hardware Requirement

        Processor: Intel core i3 2nd generation and above must be used because it is faster & provides a reliable and stable working environment.
        RAM: A RAM size of 1gb is preferred to be used as it will provide fast reading & writing capabilities.
        Microsoft Compatible 101 or more Keyboard.
        512 KB Cache Memory

Tools Required

1) Assembler for asm

2) 8086 chipset

3) Assembly language editor

4) A target machine on which the program shall be executed

5) Git and Github

Fortunately the needs of 1-3 are satisfied by the emu8086 application which has been licensed by our University.

As for the target machine it will be a windows 10 based system with the emu8086 installed in it.

Since we are a team the code shall be monitored over a remote repository on github and each of us will use git in our system to contribute to the same.

Implementation

Option 1 : Flight View from Mumbai


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emulator screen (94x25 chars)                                    —    ☐

1- View flights from Mumbai
2- Book a ticket
3- Exit the application
please choose: 1

flight name        Destination              Flight number                Timing
Indigo             Indore                   6E-624              21:35  - 22:45 (1hr 10min)
SpiceJet           Chennai                  SG-325              22:15 - 00:05+1D (1hr 50min)
Vistara            Bangalore                UK-857              21:30 - 23:10 (1hr 40min)
GoAir              Delhi                    G8-325+G8-238       21:45 - 8:05+1D (10hr 20min)
Air_India          Pune                     AI-430+AI-538       21:45 - 6:45+1D (9hr)


1- View flights from Mumbai
2- Book a ticket
3- Exit the application
please choose: _
```

```
1- View flights from Mumbai
2- Book a ticket
3- Exit the application
please choose: 2

1- Indigo
The ticket              Price
Under 6 years old       1000 Rs
Adults                  1500 Rs
seniors                 1250 Rs

2- SpiceJet
The ticket              Price
Under 6 years old       1100 Rs
Adults                  1350 Rs
seniors                 1150 Rs

3- Vistara
The ticket              Price
Under 6 years old       1050 Rs
Adults                  1500 Rs
seniors                 1350 Rs

4- GoAir
The ticket              Price
Under 6 years old       1100 Rs
Adults                  1600 Rs
seniors                 1350 Rs

5- Air_India
The ticket              Price
Under 6 years old       1150 Rs
Adults                  1400 Rs
seniors                 1350 Rs
```

Option 2: Book Tickets

Select Flight, ticket category and number of tickets

```
emulator screen (122x40 chars)                                    —    □    X

The ticket              Price
Under 6 years old       1000 Rs
Adults                  1500 Rs
seniors                 1250 Rs

2- SpiceJet
The ticket              Price
Under 6 years old       1100 Rs
Adults                  1350 Rs
seniors                 1150 Rs

3- Vistara
The ticket              Price
Under 6 years old       1050 Rs
Adults                  1500 Rs
seniors                 1350 Rs

4- GoAir
The ticket              Price
Under 6 years old       1100 Rs
Adults                  1600 Rs
seniors                 1350 Rs

5- Air_India
The ticket              Price
Under 6 years old       1150 Rs
Adults                  1400 Rs
seniors                 1350 Rs

What flight would you like to go to (1-Indigo , 2-SpiceJet, 3-Vistara, 4-GoAir, 5-Air_India)? 3
What ticket would you like to buy (1-child , 2-adult , 3-seniors)? 2
How many ticket do you want to buy 4

The total bill is: 6000

1- View flights from Mumbai
2- Book a ticket
3- Exit the application
```

Conclusion

We have successfully develop a working menu driven Flight Reservation System in emu8086. In this project, we are aiming to develop these modules:

1. Display flight information.

2. Book the flight tickets with user defined destination and age groups.

3. Show the Total bill amount and ask the user for further ticket booking/exit the system.

Future Scope

This program can be improved drastically by providing a better UI/UX to user as well as improving the billing functionality so that users can see clearly which tickets were booked under what categories, their subtotal and the breakdown of total amount.

This flight reservation system logic can further be applied to a majority of other systems, like a EMU8086 based shopping system/ any conglomerate of system.

where a user buys something under categories and subcategories, in this project, User buys a movie ticket under different genres/locations/time and subcategories like adult/ child flight ticket.

Thank You