**IMPLEMENTING THE VIEWING ALL TICKETS OF A PASSENGER**

The next task in the project is to **view all the booked tickets of a passenger**. However this task is itself divided into following subtasks:

1. Accept the mobile number with all the validations applied

2. While accepting the mobile no , allow the user to cancel the process in between

3.After the mobile no has been received , search it in the **allbookings.dat** file .

4. If mobile no is present , then display the ticket details otherwise print the message **NO DETAILS OF THE MOBILE NUMBER FOUND** .

We have divided the above requirements into 4 functions:

1. **char\* accept\_mob\_no()** : This function will accept **mobile number** from the user with all validations applied. If the user cancels the process in between it returns **NULL**.

If the input is incorrect (like wrong mobile number) then it will display the message **Error! Invalid mobile number** and again ask the user to input **mobile number**. If the input is correct it will return the **mobile number**

2. **int check\_mob\_no(char\*)**:This function will accept a mobile number as argument and check whether it is a valid mobile number or not. If it is valid it will **return 1** , otherwise it will **return 0**.

3. **int\* get\_ticket\_no(char \*)**: This function will accept a mobile number as argument and return all the ticket number booked against this mobile number . If no tickets are booked for this mobile number , it will return NULL.

4. **void view\_all\_tickets(char\*,int\*)**: This function will accept a mobile number and an array of all the ticekts booked against this mobile number and will display all of them.

So before proceeding further make the following declarations in the header file **"rlyres.h"**

**char\* accept\_mob\_no();**

**int check\_mob\_no(char\*);**

**int\* get\_ticket\_no(char \*);**

**void view\_all\_tickets(char \*,int \*);**

**DESIGNING THE "check\_mob\_no()" FUNCTION IN THE FILE "rlyres.c"**

This function will accept a mobile number as argument and check whether it is a valid mobile number exists or not. A mobile number is considered valid , if:

**i) It's length is exactly 10**

**ii)It doesn't contain any non numeric value.**

If the mobile number is valid the function will **return 1** otherwise it **returns 0**

Following is it's prototype:

**int check\_mob\_no(char \*);**

This function will do the following:

1. It will check whether the length of mobile number is 10 or not using the function **strlen()**

2. If it's **length is not 10** then the function will **return 0**

3.Otherwise , it will run a loop and check whether each character is a digit or not using a function called

**isdigit( )** available in the header file **<ctype.h>** . This function accepts a character as argument and returns a **non zero value** if it is a digit otherwise it **returns 0**.

4. If any of the character's is not a digit , then the function **check\_mob\_no()** will **return 0**

5.Finally , if all the characters are digits then the function will **return 1**.

Following is it's code:

***int check\_mob\_no(char \*p\_mob)***

***{***

***if(strlen(p\_mob)!=10)***

***return 0;***

***while(\*p\_mob!='\0')***

***{***

***if(isdigit(\*p\_mob)==0)***

***return 0;***

***p\_mob++;***

***}***

***return 1;***

***}***

**DESIGNING THE "accept\_mob\_no()" FUNCTION IN THE FILE "rlyres.c"**

This function will accept **mobile number** from the user and will return it if it is correct . if the user cancels the process in between it **returns NULL**

Following is it's prototype:

**char\* accept\_mob\_no();**

This function will do the following:

1. Prompt the user to input **mobile number**.

2. Run a loop which does the following:

i) accept the input

ii)if the input received is 0 then move to bottom coordinate (1,25) of the screen using **gotoxy()**, **erase the previous message** , set the color to **LIGHTRED** using **textcolor()** ,print the message "**Cancelling Input. . .**" , reset the color to **YELLOW** and return **0**.

***static char mob\_no[11];***

***int valid;***

***printf("Enter mobile number:");***

***do***

***{***

***fflush(stdin);***

***scanf(“%s”,mob\_no);***

***if(strcmp(mob\_no,"0")==0)***

***{***

***textcolor(LIGHTRED);***

***gotoxy(1,25);***

***printf("\t\t\t\t\t\t\t");***

***gotoxy(1,25);***

***printf("Cancelling Input. . .!");***

***getch();***

***textcolor(YELLOW);***

***return NULL;***

***}***

iii) Check whether the mobile number is valid or not using the function **check\_mob\_no()** . If it is invalid then move to bottom coordinate (1,25) of the screen using **gotoxy()**, , set the color to **LIGHTRED** using **textcolor()** ,print the message **Error! Invalid mobile no**" , move back to coordinate (21,1) , erase the entered value and reset the color to **YELLOW** .

iv) Repeat this until input received is correct.

v) After the loop is over , return the **mobile number**

***valid=check\_mob\_no(mob\_no);***

***if(valid==0)***

***{***

***textcolor(LIGHTRED);***

***gotoxy(1,25);***

***printf("Error! Invalid Mobile No");***

***getch();***

***gotoxy(21,1);***

***printf("\t\t\t\t\t\t");***

***gotoxy(21,1);***

***textcolor(YELLOW);***

***}***

***}while(valid==0);***

***clrscr();***

***return mob\_no;***

***}***

So for all the above steps the combined code will be:

***char\* accept\_mob\_no()***

***{***

***static char mob\_no[11];***

***char \*pos;***

***int valid;***

***printf("Enter mobile number:");***

***do***

***{***

***fflush(stdin);***

***fgets(mob\_no,11,stdin);***

***pos=strchr(mob\_no,'\n');***

***if(pos!=NULL)***

***\*pos='\0';***

***if(strcmp(mob\_no,"0")==0)***

***{***

***textcolor(LIGHTRED);***

***gotoxy(1,25);***

***printf("\t\t\t\t\t\t\t");***

***gotoxy(1,25);***

***printf("Cancelling Input. . .!");***

***getch();***

***textcolor(YELLOW);***

***return NULL;***

***}***

***valid=check\_mob\_no(mob\_no);***

***if(valid==0)***

***{***

***textcolor(LIGHTRED);***

***gotoxy(1,25);***

***printf("Error! Invalid Mobile No");***

***getch();***

***gotoxy(21,1);***

***printf("\t\t\t\t\t\t");***

***gotoxy(21,1);***

***textcolor(YELLOW);***

***}***

***}while(valid==0);***

***clrscr();***

***return mob\_no;***

***}***

**DESIGNING THE "get\_ticket\_no()" FUNCTION IN THE FILE "rlyres.c"**

This function will accept a mobile number as argument and return all the ticket numbers booked against this mobile number. If no tickets are booked against this **mobile number** , it will return **NULL**.

Following is it's prototype:

**int\* get\_ticket\_no(char \*p\_mob\_no)**

This function will do the following:

1. Open the file **allbookings.dat**

2. If the file is not present , it will return **NULL**.

3. Then it will **read a record from the file allbookings.dat ,** match the **mobile number** with the argument passed and if the match **found** it will increment the variable **count** by 1 .

4. After all records have been read, it will check the value of **count** . If it is **0** , it means no bookings for the given mobile number have been done , so the function will return **NULL**.

5.Otherwise , it will create a dynamic array of **count+1** integers, again **read the file** and **copy** all the ticket numbers belonging to this mobile number in this array.

6. Finally at the last position in the array it will assign -1 ( to indicate end of the array) and return that array

Following is it's code:

***int\* get\_ticket\_no(char \*p\_mob\_no)***

***{***

***int count=0;***

***FILE \*fp=fopen("d:\\myproject\\allbookings.dat","rb");***

***if(fp==NULL)***

***{***

***return NULL;***

***}***

***Passenger pr;***

***while(fread(&pr,sizeof(pr),1,fp)==1)***

***{***

***if(strcmp(pr.mob\_no,p\_mob\_no)==0)***

***++count;***

***}***

***if(count==0)***

***{***

***fclose(fp);***

***return NULL;***

***}***

***rewind(fp);***

***int \*p=(int\*)malloc((count+1)\*sizeof(int));***

***int i=0;***

***while(fread(&pr,sizeof(pr),1,fp)==1)***

***{***

***if(strcmp(pr.mob\_no,p\_mob\_no)==0)***

***{***

***\*(p+i)=pr.ticketno;***

***i++;***

***}***

***}***

***\*(p+i)=-1;***

***fclose(fp);***

***return p;***

***}***

**DESIGNING THE "view\_all\_tickets()" FUNCTION IN THE FILE "rlyres.c"**

This function will display all the ticket numbers passed to it as argument. If the ticket numbers passed is **NULL** it will display the message **No tickets booked against the mobile number<mobile number> .**

Following is it's prototype:

**void view\_all\_tickets(char \*,int \*)**

This function will do the following:

1. Check whether ticket number array is NULL or not.

2. If it is **NULL** , then display the message  **No tickets booked against the mobile number<mobile number>** and return.

3.If the array passed is not NULL then display the message **Following** **are tickets booked for mobile no <mobile no>**, and display all the **ticket numbers**

Following is it's code:

***void view\_all\_tickets(char \*pmob\_no,int \*pticket\_no)***

***{***

***if(pticket\_no==NULL)***

***{***

***textcolor(LIGHTRED);***

***printf("Sorry! No tickets booked against mobile no %s",pmob\_no);***

***textcolor(WHITE);***

***printf("\n\nPress any key to go back to the main screen");***

***textcolor(YELLOW);***

***getch();***

***return;***

***}***

***printf("Following are tickets booked for mobile no %s",pmob\_no);***

***int i;***

***printf("\n\nTICKET NO\n");***

***printf("---------");***

***for(i=0;\*(pticket\_no+i)!=-1;i++)***

***printf("\n%d",\*(pticket\_no+i));***

***textcolor(WHITE);***

***printf("\n\nPress any key to go back to the main screen");***

***textcolor(YELLOW);***

***free(pticket\_no);***

***getch();***

***}***

**UPDATING THE "main()" FUNCTION**

Now finally to get this module working we will have to change the **main()** function’s

**case 4:** in **switch** statement.

Here are the steps to be done in the function **main()**:

1. Call the on **accept\_mobile\_no()** function
2. Check whether the value returned by this function is **NULL** or not
3. If it is not **NULL** , then call the function **get\_ticket\_no()** passing it the mobile number as argument and pass the **mobile number** and **the array** returned by this function to the function **view\_all\_tickets( )**

Here is the code for switch statement **case 4:** in **main()**:

***case 4:***

***clrscr();***

***pmob\_no=accept\_mob\_no();***

***if(pmob\_no!=NULL)***

***{***

***pticket\_no=get\_ticket\_no(pmob\_no);***

***view\_all\_tickets(pmob\_no,pticket\_no);***

***}***

***clrscr();***

***break;***