**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 their details by searching in the file **allbookings.dat.**

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];***

***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;***

***}***

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);***

***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;***