King Saud University
College of Computer and Information Sciences
Computer Science Department
CSC215: Procedural Programming with C

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Content:

***Ps:** The project was intended to be 3-4 students, but our teammate dropped the course, so we continued as tow student in a limited period of time.

Methods explain:

1- Method " void editrecord ()"

This method will ask the user to enter an ID, and is he just want to know if the given ID is existed or not, or if he wants to update the list of companions of this ID. The method use "curr" to point on the first element of single visitor attendees, it will check if the given ID same curr's ID or not , if it is the same it will change the flag to true and exist the loop, if it is not it will move curr to the next element and so on until find the given ID or reach the last element and (curr == NULL). Then the method changes curr to point on the first element of registered visitor attendees and do the same thing.

If the user chooses to search only, then if the given ID is existed one or both flags will change to true and enter if statement "(foundR || foundS)" and print a message to tell the user ID is existed. If the given ID does not exist that means the two flags are still "false" and the if statement "((!foundR) && (!foundS))" will be true and it will print a message to tell the user it is a wrong ID and exit from the method (even if the user choose to update the list of companions).

If the user chooses to update the list of companions (must be a registered visitor), the method will ask him if he want to delete or add and the number he wants to update and check if the number is 0 or negative.

If he wants to delete the method will check if the number more than number of companions he actually have, if not it will ask him to enter the ID of companions he wants to delete and use "temp" to point on the first element of the list of companions he have, it will keep search until found companion with same ID then it will shifting the list to keep this companion in the last. if the companion was not in the beginning of the list, temp will move to the next element and so on until find the given companion's ID. In the end, the number of companions will decrease, and the method will resize the list of companions which will delete the latest elements (the companions the user wants to delete).

If he wants to add, the method will change the total fees depends on number of companions he wants to add and ask about the new balance and check if it allowed or not, if it is allowed the method will resize the list of companions and ask the user to enter companions' information, in the end balance will change to the new one and number of companions will increase.

2- Method " void deleterecord()"

This method will ask about the user ID then enter loop to count the number of activities this ID have (use "cur" to point on the first element of head which include registered and single visitor attendees). If the number more than one it will print all activities he has and ask him if the user wants to delete all activities or single one and curr will point to head again.

If the user chooses all then curr will enter loop repeat the same number of activities for this user, if the ID of user was in the beginning of head it will changes head to the next and free the old head, if not it will enter loop until find the given ID and free it.

If the user chooses one activity it will ask him to enter the name of activity he wants to delete, and do the same thing in case one without loop and with add condition to

check the name of activity with ID. If the number of activities was one it will use the same way in case 2 to delete the record without need to ask about the name.
Else, if the number of activities still zero it will print a message to tell the user the given ID is wrong.

3- Method " void printList()"

This method will print the name of activity and then print all registered attendee's information whose register in this activity using "curr" " to point on the first element of registered attendees and check if it registers in this activity by its name until the last element. Then print the single visitor attendee's information using same way except "curr" will " point on the first element of single visitor attendees, finally print companion information for same activity using same loop in first case and adding another one repeat same number of companions the attendee has, the outer loop will repeat same number of activities in the system.

4- Method " void showattendeereport()"

This method enter loop will repeat same number of activities in the system and there is inner loop will check if "cur" has same name of activity, if true then it will count the number of attendees of this activity and if the attendee was register and have companion/s it will count them too and print to total attendees' numbers for each activity.
The method will ask the user to enter a date, and changes "cur" to point on the first element of registered and single visitor attendees and enter loop will repeat same number of activities in the system and there is inner loop will check if "cur" has same date that user entered and count the number of attendees in this activity on this date and print it with the name of activity, the counter will changes to zero when the method goes to the next activity, there is another counter which total counter will count all attendees in all activities on this date. In the end the method will print total number of attendees in all activities on this date and total income.

5- Method "void editactivity()"

This method will ask the user to enter an activity name and search if it exists or not, if it is existed it will print a message and exit from the method, else it will ask the user about activity details and add it in the activities list. In the end it will add the activity to the file and increase number of activities and print a message when added done.

6- Method " void showattendee()"

This method prints a menu if user chooses 1 then it well creates a list contains all attendees in then using sort to rearrange them in alphabetical order after the loop it will print header of attendee's information and enter loop to print all list member.
If user chooses 2 it will print header of single visitor information, then enter loop which print all members in single visitor by using "cur" to point on the first element of single visitor attendees. if user chooses 3 it will do same thing in case 2 but for registered attendees. if user chooses 4 it will ask him to enter a date and print header of attendees' information. And use "cur" to point on the first element of all

attendees then enter a loop which check if cur has the same date or not, if true it will print its information and move to next member to check, if not it will move without print. if user chooses 5 it will print a message and exit the method.

6- Method " int ErrorHandle()"

This method to handle invalid input, it will ask the user if he wants to reenter his data (then return 0) or continue (return 2), otherwise return 0.

7- Method " int AgetoNum(char ch[])"

This method will enter loop repeated until the end of the given string and check if each character is digit or not, and it will convert the string digits to number.

8- Method " int searchDate(char *date)"

This method will count and return the number of attendees of the given date (registered, single visitor and companions) by use "cur" which point to list of registered and single visitor attendees until the last member.

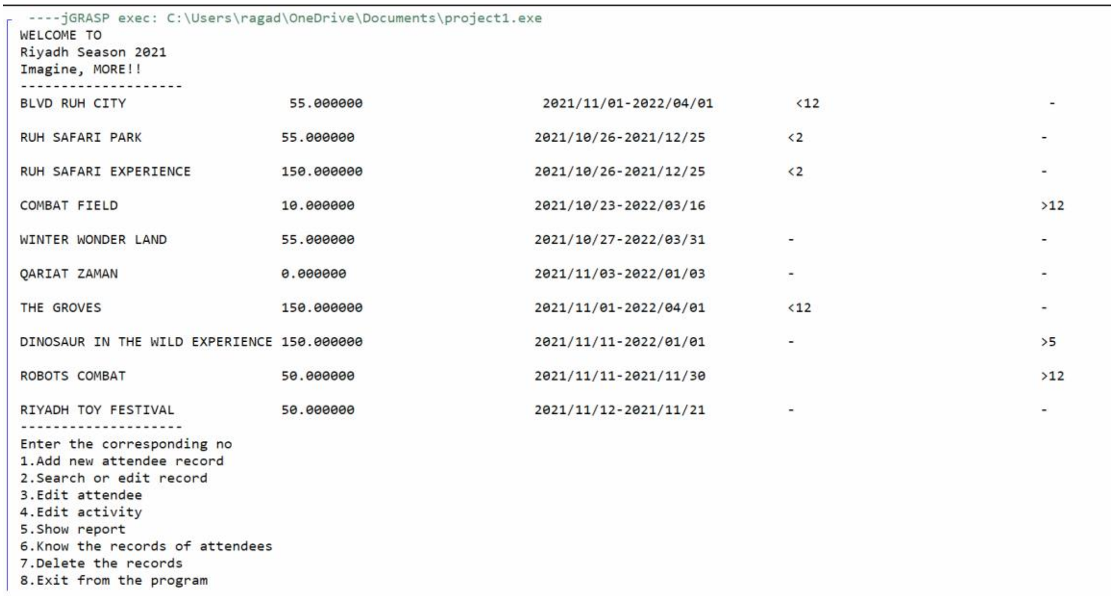
9- Method " addNewAttendee()"

This method will ask the user to enter his information and check if the date format is valid and the number of attendees is not more 50 in same date and check if activity zone is existed or not, it will ask and add companions if it registered attendee and check if the balance is allowed or not. Finally, it will add the attendee to list of all attendees and another list depended on its state. In end it will print information for the attendee and write it in the file depended on its state.

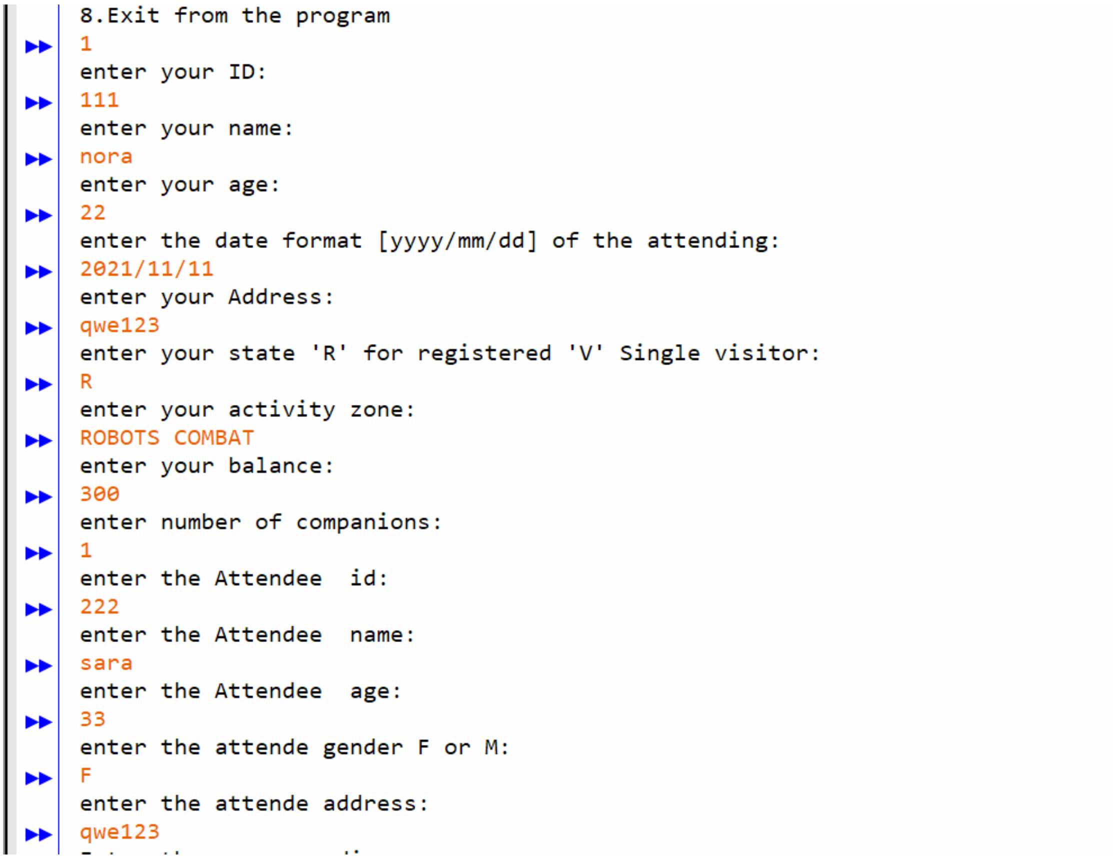
10- Method "writeattendee (char* fileName,struct Attendee *temp))"

This method open file in mode appends and write attendee information on it.

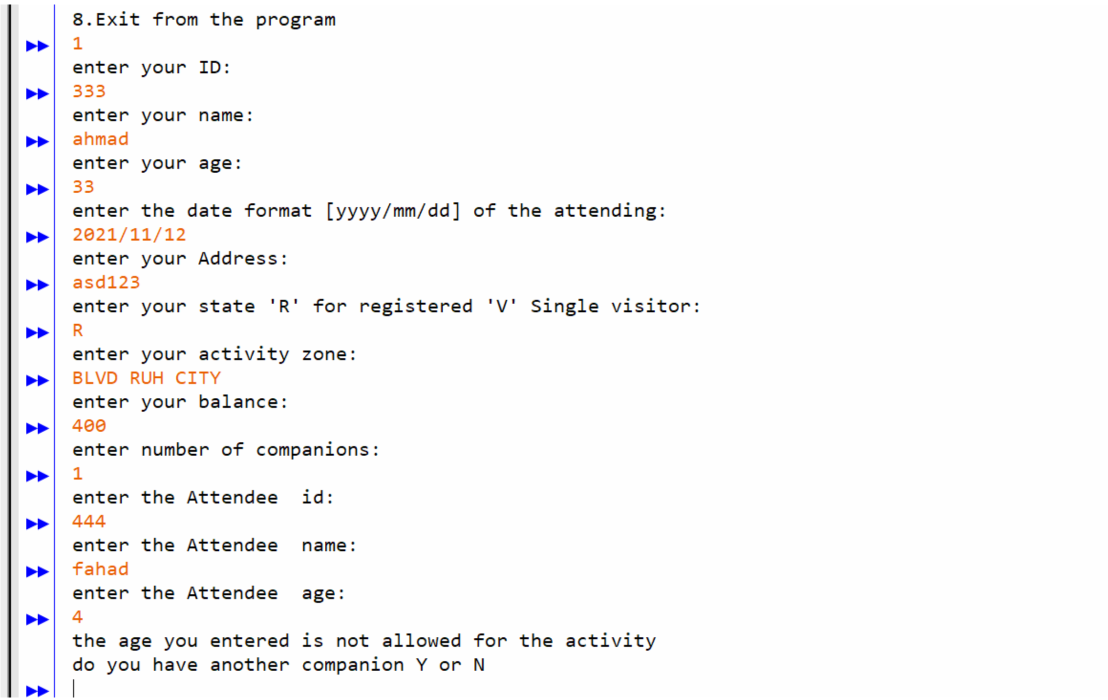
Sample run:



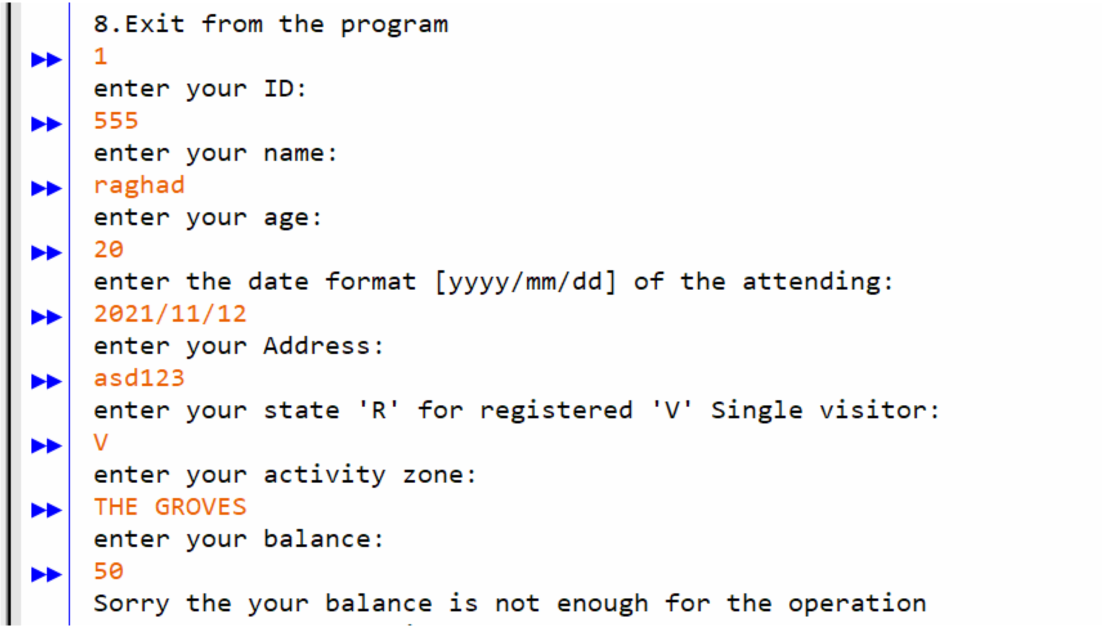
```
  ----jGRASP exec: C:\Users\ragad\OneDrive\Documents\project1.exe
WELCOME TO
Riyadh Season 2021
Imagine, MORE!!
--------------------
BLVD RUH CITY                    55.000000                      2021/11/01-2022/04/01          <12                            -

RUH SAFARI PARK                 55.000000                      2021/10/26-2021/12/25          <2                             -

RUH SAFARI EXPERIENCE           150.000000                     2021/10/26-2021/12/25          <2                             -

COMBAT FIELD                    10.000000                      2021/10/23-2022/03/16                                         >12

WINTER WONDER LAND              55.000000                      2021/10/27-2022/03/31          -                              -

QARIAT ZAMAN                    0.000000                       2021/11/03-2022/01/03          -                              -

THE GROVES                      150.000000                     2021/11/01-2022/04/01          <12                            -

DINOSAUR IN THE WILD EXPERIENCE 150.000000                     2021/11/11-2022/01/01          -                              >5

ROBOTS COMBAT                   50.000000                      2021/11/11-2021/11/30                                         >12

RIYADH TOY FESTIVAL             50.000000                      2021/11/12-2021/11/21          -                              -
--------------------
Enter the corresponding no
1.Add new attendee record
2.Search or edit record
3.Edit attendee
4.Edit activity
5.Show report
6.Know the records of attendees
7.Delete the records
8.Exit from the program
```



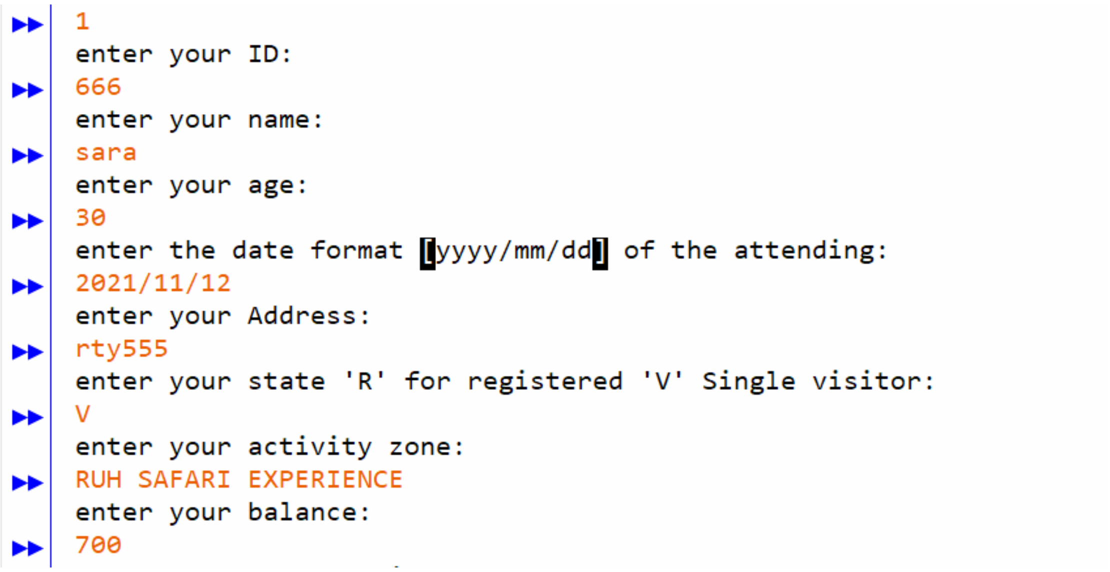
```
8.Exit from the program
1
enter your ID:
111
enter your name:
nora
enter your age:
22
enter the date format [yyyy/mm/dd] of the attending:
2021/11/11
enter your Address:
qwe123
enter your state 'R' for registered 'V' Single visitor:
R
enter your activity zone:
ROBOTS COMBAT
enter your balance:
300
enter number of companions:
1
enter the Attendee  id:
222
enter the Attendee  name:
sara
enter the Attendee  age:
33
enter the attende gender F or M:
F
enter the attende address:
qwe123
```



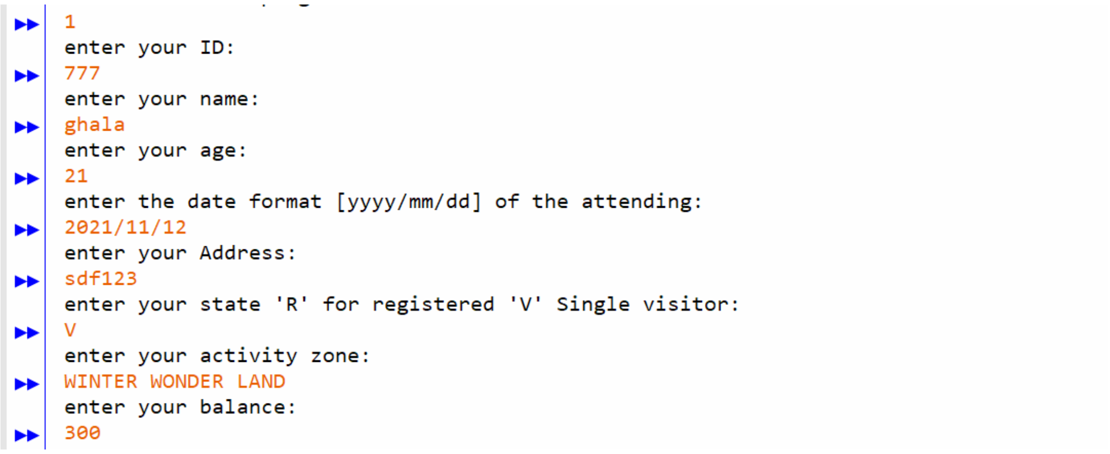
```
8.Exit from the program
1
enter your ID:
333
enter your name:
ahmad
enter your age:
33
enter the date format [yyyy/mm/dd] of the attending:
2021/11/12
enter your Address:
asd123
enter your state 'R' for registered 'V' Single visitor:
R
enter your activity zone:
BLVD RUH CITY
enter your balance:
400
enter number of companions:
1
enter the Attendee  id:
444
enter the Attendee  name:
fahad
enter the Attendee  age:
4
the age you entered is not allowed for the activity
do you have another companion Y or N
```



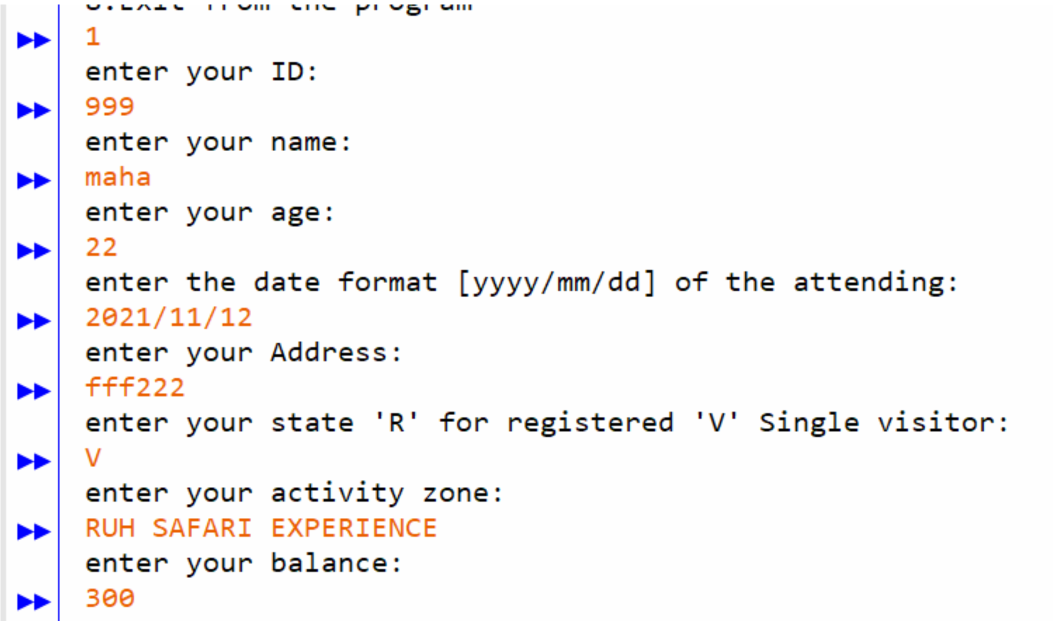
```
8.Exit from the program
1
enter your ID:
555
enter your name:
raghad
enter your age:
20
enter the date format [yyyy/mm/dd] of the attending:
2021/11/12
enter your Address:
asd123
enter your state 'R' for registered 'V' Single visitor:
V
enter your activity zone:
THE GROVES
enter your balance:
50
Sorry the your balance is not enough for the operation
```



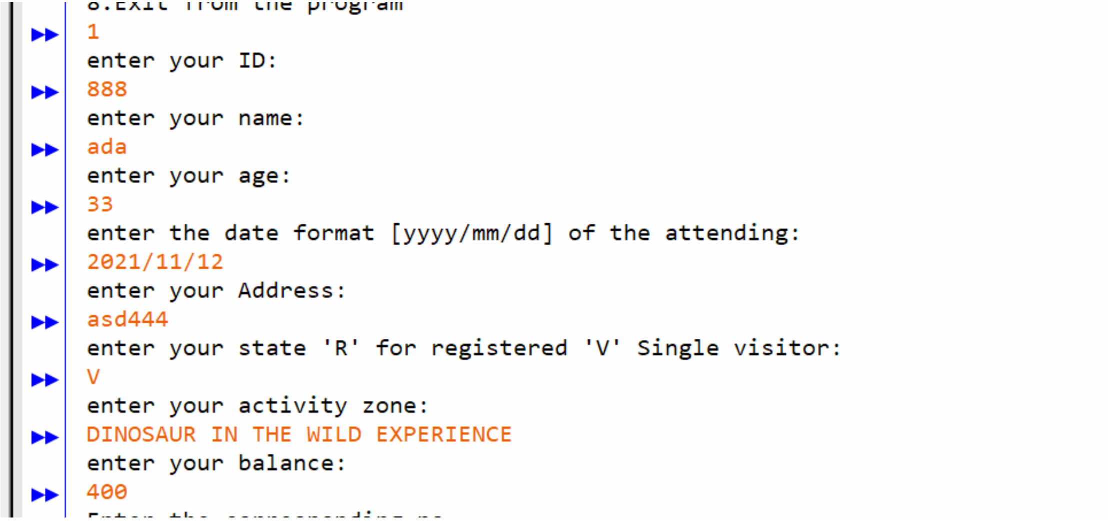
```
▶▶ 1
   enter your ID:
▶▶ 666
   enter your name:
▶▶ sara
   enter your age:
▶▶ 30
   enter the date format [yyyy/mm/dd] of the attending:
▶▶ 2021/11/12
   enter your Address:
▶▶ rty555
   enter your state 'R' for registered 'V' Single visitor:
▶▶ V
   enter your activity zone:
▶▶ RUH SAFARI EXPERIENCE
   enter your balance:
▶▶ 700
```



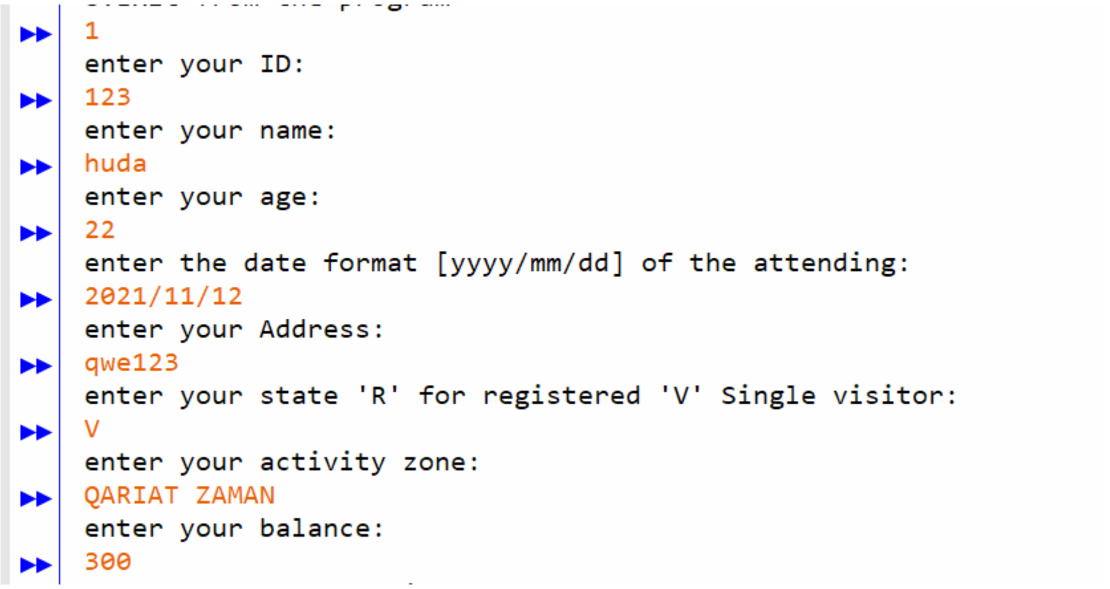
```
▶▶ 1
   enter your ID:
▶▶ 777
   enter your name:
▶▶ ghala
   enter your age:
▶▶ 21
   enter the date format [yyyy/mm/dd] of the attending:
▶▶ 2021/11/12
   enter your Address:
▶▶ sdf123
   enter your state 'R' for registered 'V' Single visitor:
▶▶ V
   enter your activity zone:
▶▶ WINTER WONDER LAND
   enter your balance:
▶▶ 300
```



```
8.Exit from the program
1
enter your ID:
999
enter your name:
maha
enter your age:
22
enter the date format [yyyy/mm/dd] of the attending:
2021/11/12
enter your Address:
fff222
enter your state 'R' for registered 'V' Single visitor:
V
enter your activity zone:
RUH SAFARI EXPERIENCE
enter your balance:
300
```

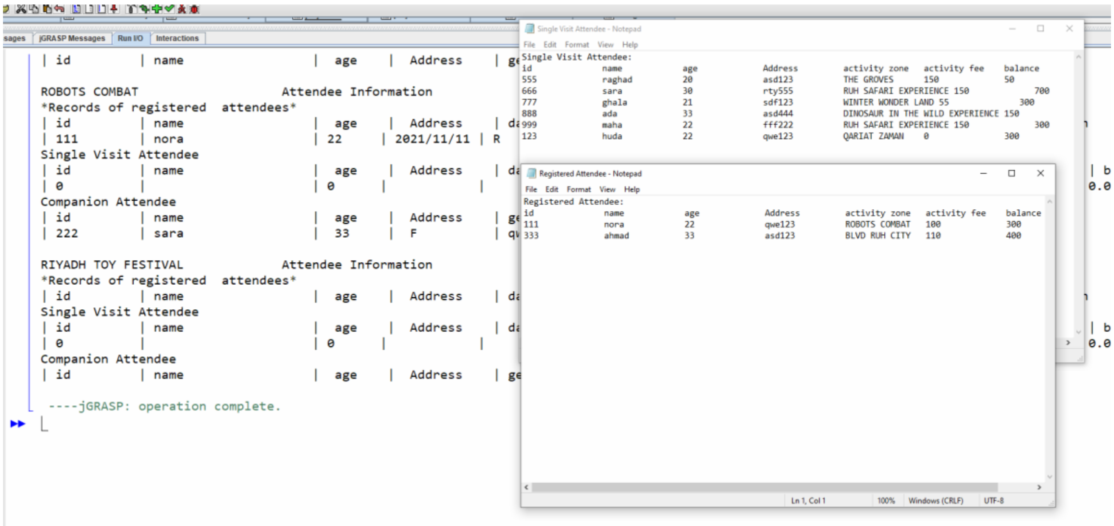


```
8.Exit from the program
1
enter your ID:
888
enter your name:
ada
enter your age:
33
enter the date format [yyyy/mm/dd] of the attending:
2021/11/12
enter your Address:
asd444
enter your state 'R' for registered 'V' Single visitor:
V
enter your activity zone:
DINOSAUR IN THE WILD EXPERIENCE
enter your balance:
400
Enter the corresponding no
```



```
1
enter your ID:
123
enter your name:
huda
enter your age:
22
enter the date format [yyyy/mm/dd] of the attending:
2021/11/12
enter your Address:
qwe123
enter your state 'R' for registered 'V' Single visitor:
V
enter your activity zone:
QARIAT ZAMAN
enter your balance:
300
```

Output from adding the attendees:


sages
jGRASP Messages
Run I/O
Interactions
Single Visit Attendee - Notepad
Registered Attendee - Notepad
File Edit Format View Help
Ln 1, Col 1
100%
Windows (CRLF)
UTF-8

```
| id          | name                     |  age    |  Address     | ge
ROBOTS COMBAT                    Attendee Information
*Records of registered  attendees*
| id          | name                     |  age    |  Address     | da
| 111         | nora                     | 22     | 2021/11/11 | R
Single Visit Attendee
| id          | name                     |  age    |  Address     | da
| 0           |                          | 0      |              |
Companion Attendee
| id          | name                     |  age    |  Address     | ge
| 222         | sara                     |  33     |  F           | qu

RIYADH TOY FESTIVAL              Attendee Information
*Records of registered  attendees*
| id          | name                     |  age    |  Address     | da
Single Visit Attendee
| id          | name                     |  age    |  Address     | da
| 0           |                          | 0      |              |
Companion Attendee
| id          | name                     |  age    |  Address     | ge

 ----jGRASP: operation complete.
```

```
Single Visit Attendee:
id          name        age         Address     activity zone   activity fee    balance
555         raghad      20          asd123      THE GROVES      150             50
666         sara        30          rty555      RUH SAFARI EXPERIENCE 150               700
777         ghala       21          sdf123      WINTER WONDER LAND 55               300
888         ada         33          asd444      DINOSAUR IN THE WILD EXPERIENCE 150
999         maha        22          fff222      RUH SAFARI EXPERIENCE 150               300
123         huda        22          qwe123      QARIAT ZAMAN    0               300
```

```
Registered Attendee:
id          name        age         Address     activity zone   activity fee    balance
111         nora        22          qwe123      ROBOTS COMBAT   100             300
333         ahmad       33          asd123      BLVD RUH CITY   110             400
```