

## Screenshot of the Significant Output

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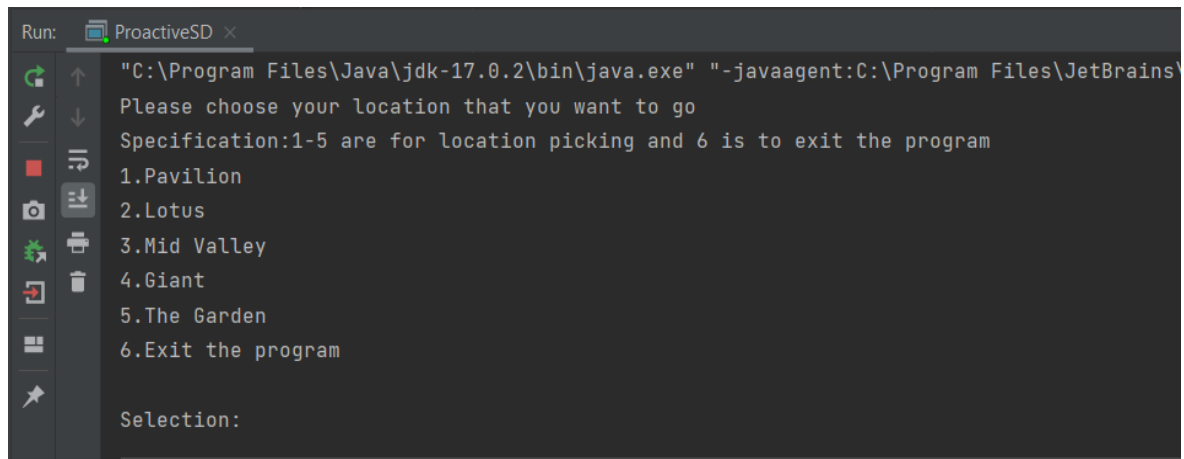
Module: Programming Paradigms (COMP1029)

School: University of Nottingham Malaysia

Lecturer : Dr. Mohammad Aazam

## Screenshot of the significant output

### 1. Display of the menu when run the program

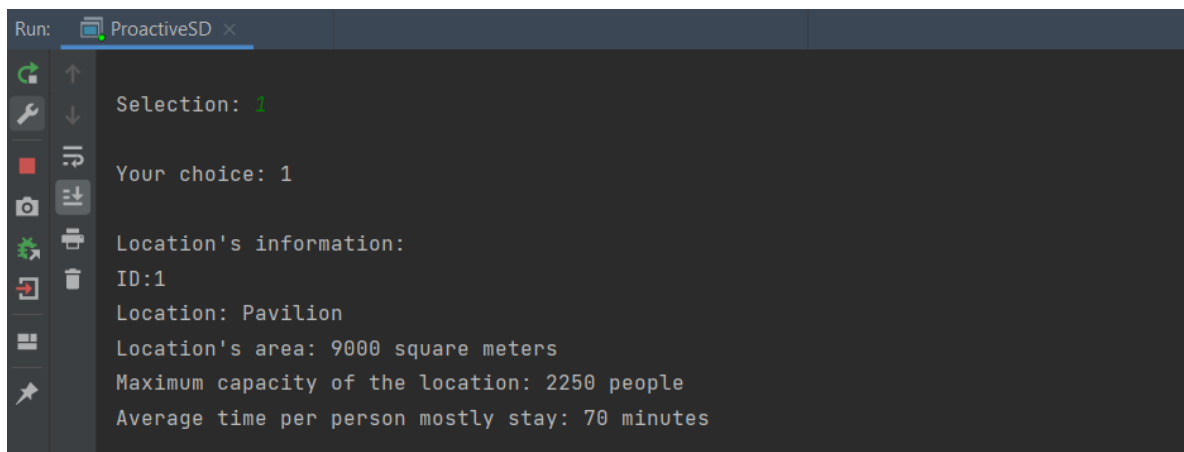


```
Run: ProactiveSD x
"C:\Program Files\Java\jdk-17.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\
Please choose your location that you want to go
Specification:1-5 are for location picking and 6 is to exit the program
1.Pavilion
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program

Selection:
```

### 2. The output after inserted the selection

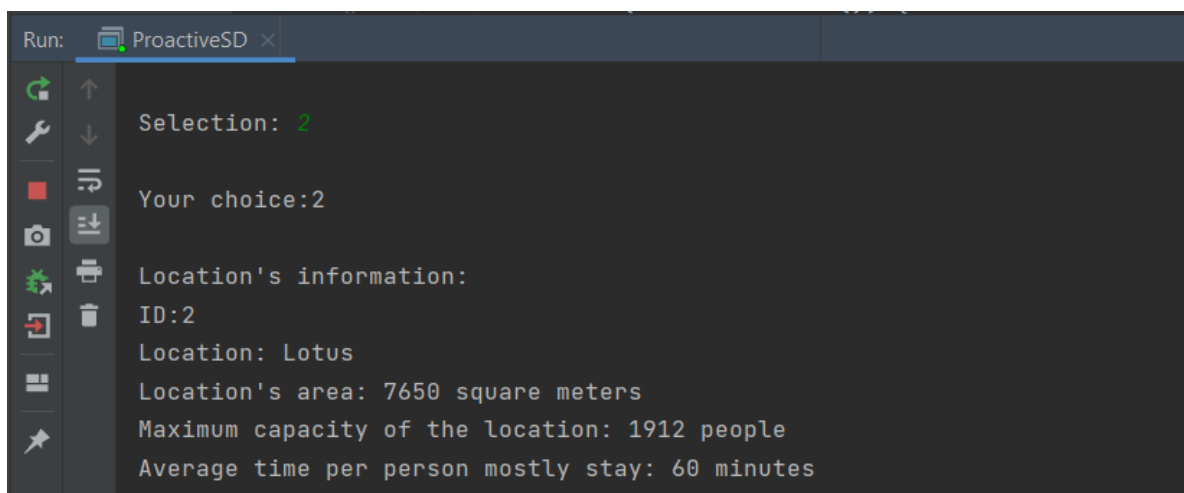
#### i. Selection of number 1:



```
Run: ProactiveSD x
Selection: 1
Your choice: 1

Location's information:
ID:1
Location: Pavilion
Location's area: 9000 square meters
Maximum capacity of the location: 2250 people
Average time per person mostly stay: 70 minutes
```

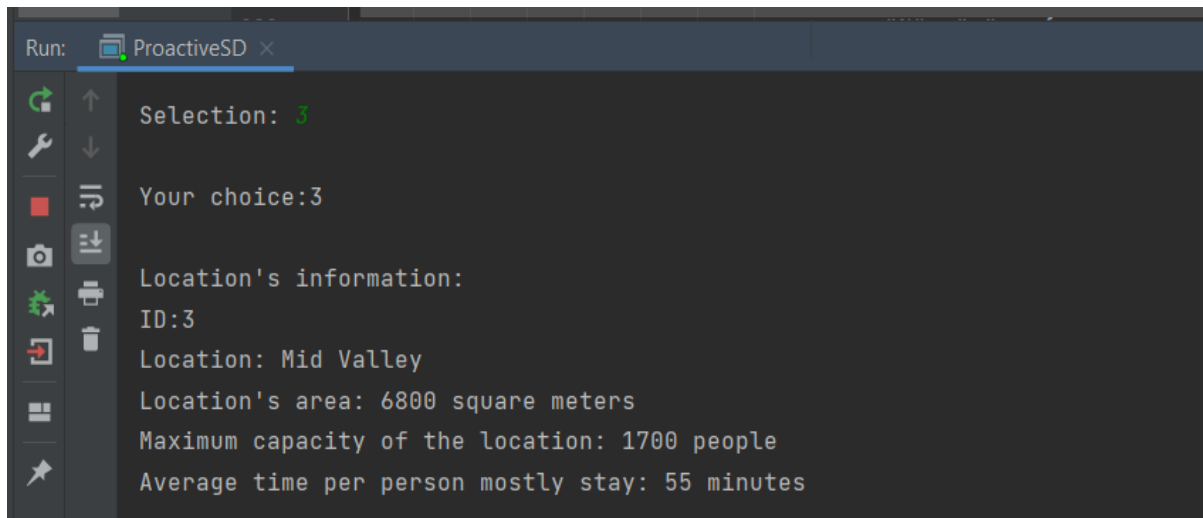
#### ii. Selection of number 2:



```
Run: ProactiveSD x
Selection: 2
Your choice:2

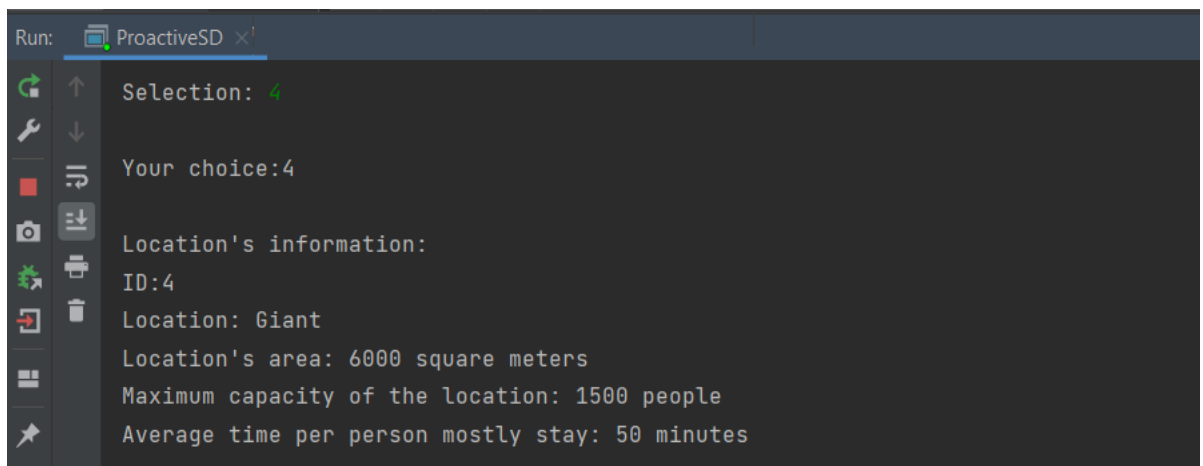
Location's information:
ID:2
Location: Lotus
Location's area: 7650 square meters
Maximum capacity of the location: 1912 people
Average time per person mostly stay: 60 minutes
```

iii. Selection of number 3:

A screenshot of a terminal window titled "Run: ProactiveSD x". The terminal displays the following text: "Selection: 3", "Your choice:3", "Location's information:", "ID:3", "Location: Mid Valley", "Location's area: 6800 square meters", "Maximum capacity of the location: 1700 people", and "Average time per person mostly stay: 55 minutes". On the left side of the terminal, there is a vertical toolbar with various icons including a refresh button, a search icon, a list icon, a camera icon, a print icon, a trash icon, a window icon, and a pin icon.

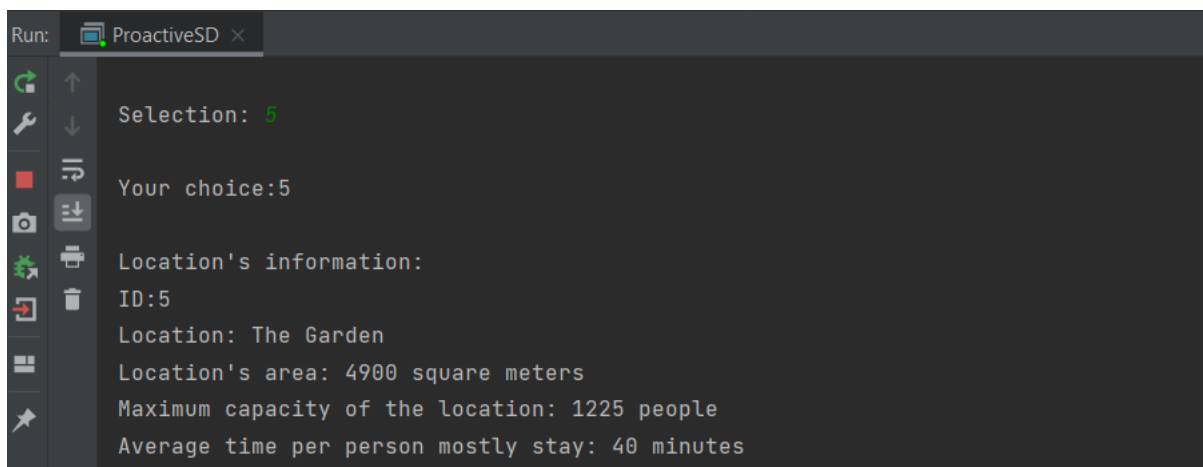
```
Run: ProactiveSD x
Selection: 3
Your choice:3
Location's information:
ID:3
Location: Mid Valley
Location's area: 6800 square meters
Maximum capacity of the location: 1700 people
Average time per person mostly stay: 55 minutes
```

iv. Selection of number 4:

A screenshot of a terminal window titled "Run: ProactiveSD x!". The terminal displays the following text: "Selection: 4", "Your choice:4", "Location's information:", "ID:4", "Location: Giant", "Location's area: 6000 square meters", "Maximum capacity of the location: 1500 people", and "Average time per person mostly stay: 50 minutes". The left sidebar with icons is identical to the previous screenshot.

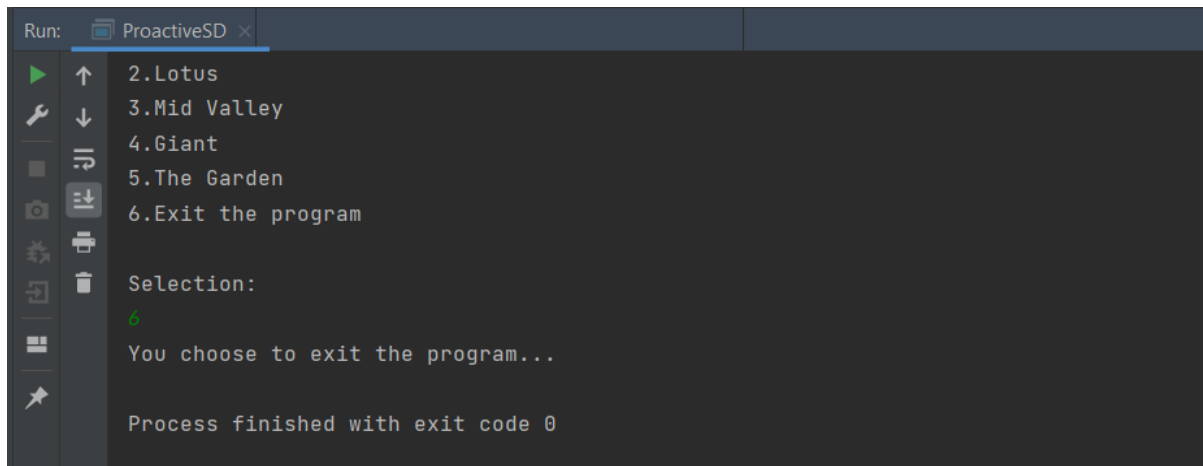
```
Run: ProactiveSD x!
Selection: 4
Your choice:4
Location's information:
ID:4
Location: Giant
Location's area: 6000 square meters
Maximum capacity of the location: 1500 people
Average time per person mostly stay: 50 minutes
```

v. Selection of number 5

A screenshot of a terminal window titled "Run: ProactiveSD x". The terminal displays the following text: "Selection: 5", "Your choice:5", "Location's information:", "ID:5", "Location: The Garden", "Location's area: 4900 square meters", "Maximum capacity of the location: 1225 people", and "Average time per person mostly stay: 40 minutes". The left sidebar with icons is identical to the previous screenshots.

```
Run: ProactiveSD x
Selection: 5
Your choice:5
Location's information:
ID:5
Location: The Garden
Location's area: 4900 square meters
Maximum capacity of the location: 1225 people
Average time per person mostly stay: 40 minutes
```

### vi. Selection of number 6(exit program)



```
Run: ProactiveSD x
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program

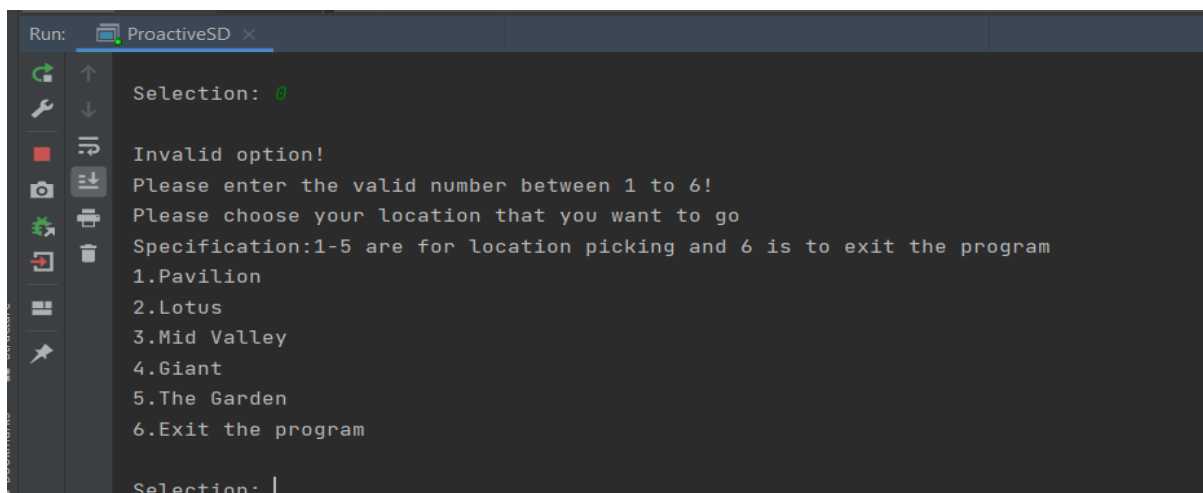
Selection:
6

You choose to exit the program...

Process finished with exit code 0
```

### 3. The output when user input the invalid number and string(error handling)

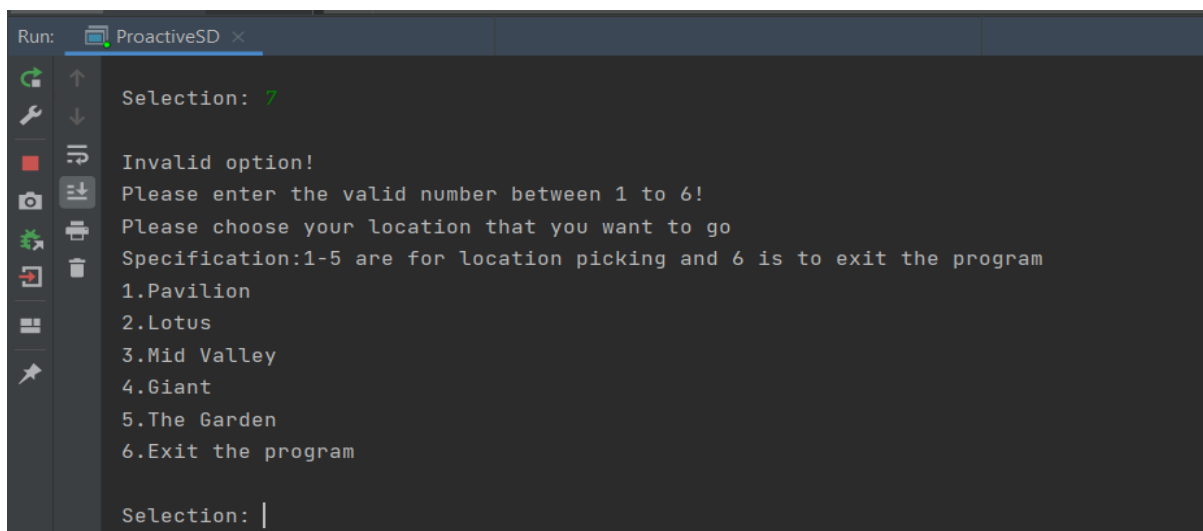
#### i. Invalid number



```
Run: ProactiveSD x
Selection: 0

Invalid option!
Please enter the valid number between 1 to 6!
Please choose your location that you want to go
Specification:1-5 are for location picking and 6 is to exit the program
1.Pavilion
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program

Selection: |
```

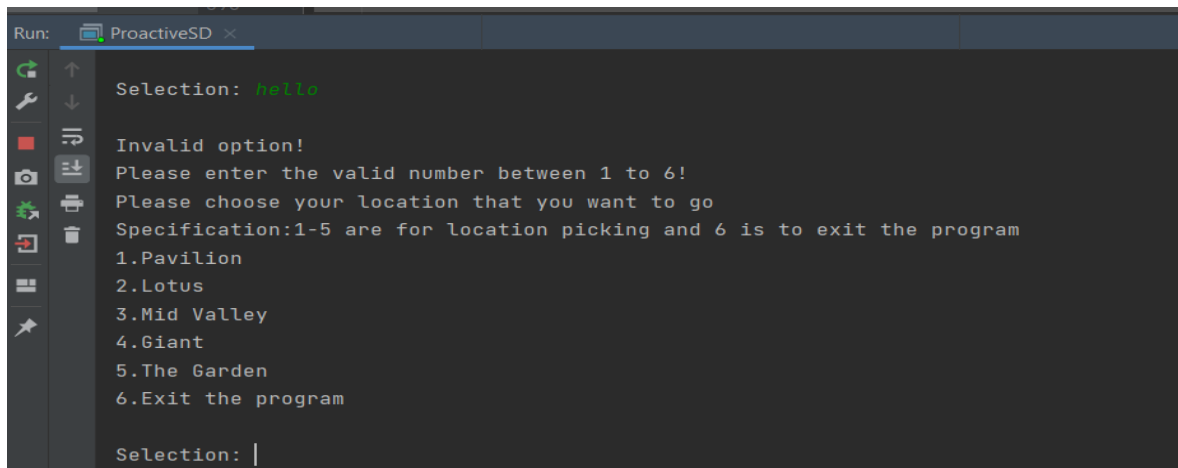


```
Run: ProactiveSD x
Selection: 7

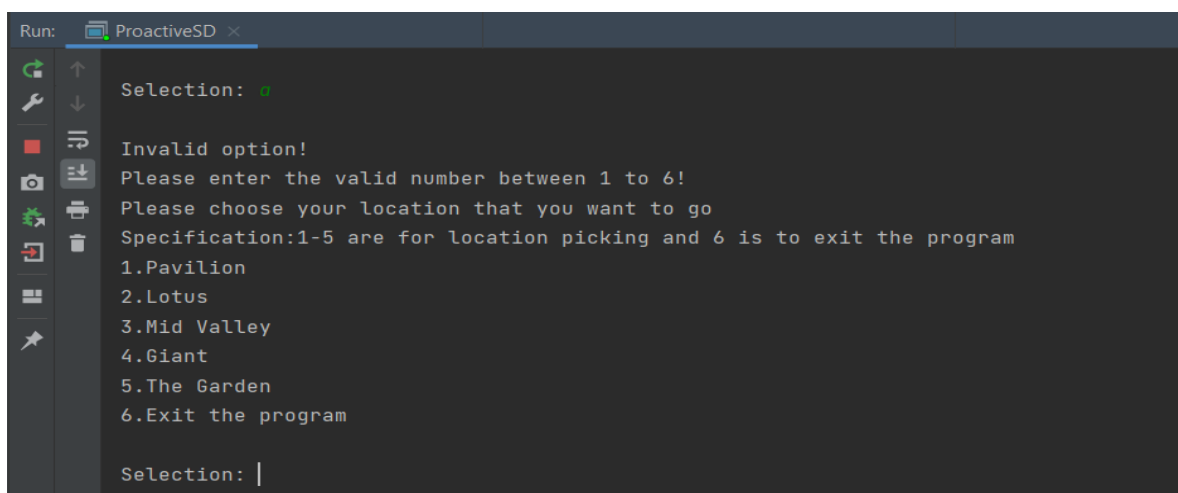
Invalid option!
Please enter the valid number between 1 to 6!
Please choose your location that you want to go
Specification:1-5 are for location picking and 6 is to exit the program
1.Pavilion
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program

Selection: |
```

## ii. string or alphabet

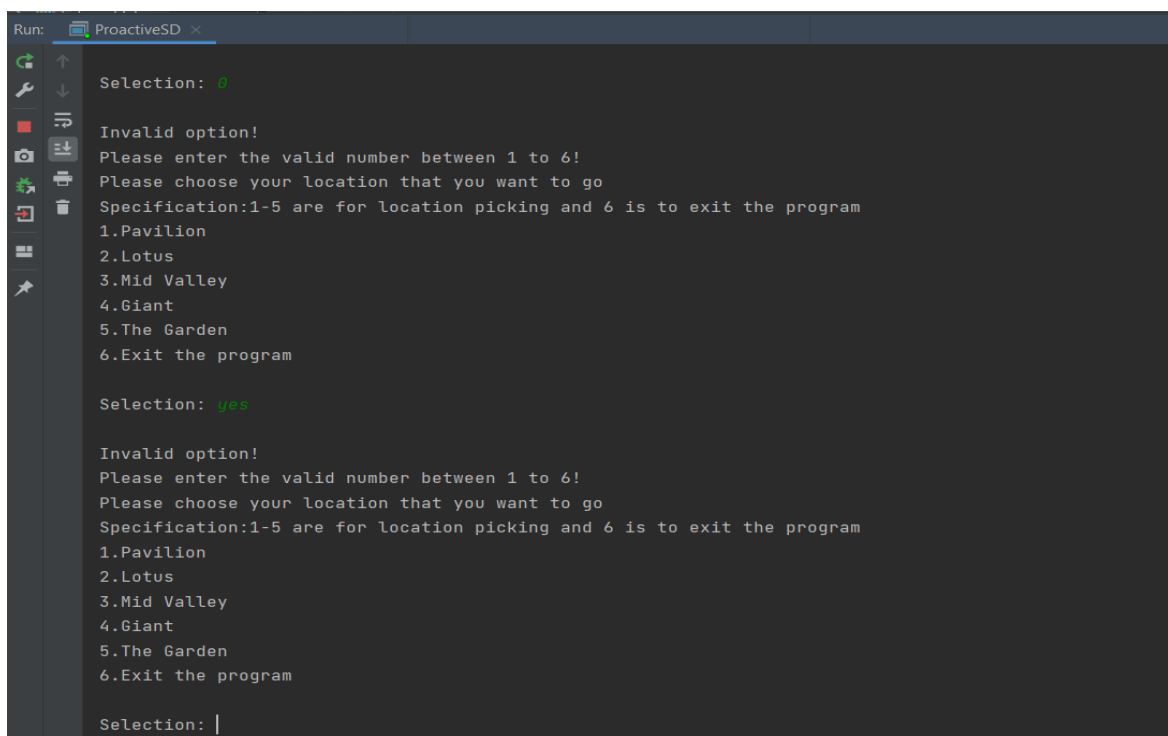


```
Run: ProactiveSD x
Selection: hello
Invalid option!
Please enter the valid number between 1 to 6!
Please choose your location that you want to go
Specification:1-5 are for location picking and 6 is to exit the program
1.Pavilion
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program
Selection: |
```



```
Run: ProactiveSD x
Selection: a
Invalid option!
Please enter the valid number between 1 to 6!
Please choose your location that you want to go
Specification:1-5 are for location picking and 6 is to exit the program
1.Pavilion
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program
Selection: |
```

## iii. User insert the invalid input a few times



```
Run: ProactiveSD x
Selection: 0
Invalid option!
Please enter the valid number between 1 to 6!
Please choose your location that you want to go
Specification:1-5 are for location picking and 6 is to exit the program
1.Pavilion
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program

Selection: yes
Invalid option!
Please enter the valid number between 1 to 6!
Please choose your location that you want to go
Specification:1-5 are for location picking and 6 is to exit the program
1.Pavilion
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program

Selection: |
```

4. The output if the random generator of the visitor generated a number that less than the maximum capacity

```
Run: ProactiveSD x
Location's information:
ID:1
Location: Pavilion
Location's area: 9000 square meters
Maximum capacity of the location: 2250 people
Average time per person mostly stay: 70 minutes

The location's current capacity is 344 person
You may enter the Pavilion.

Enter the distance(in meter) with other in four direction(north, south, east, west)
North:
|
```

5. The output if the random generator of the visitor generated a number that equal or more than the maximum capacity

```
Run: ProactiveSD x
Location's information:
ID:1
Location: Pavilion
Location's area: 9000 square meters
Maximum capacity of the location: 2250 people
Average time per person mostly stay: 70 minutes

The maximum capacity of the location has been reached.The average time per person to wait is around 70 minutes
Do you want to wait?
If Yes, please insert Y and you will queue up for the inserted location.
If No, please insert N and you can reinsert the new location that you want to go.
Enter your choice(Y/N): |
```

## 6. The output when user press the Y (Y or y is accepted)

### i. The user press Y

```
Run: ProactiveSD x
The maximum capacity of the location has been reached.The average time per person to wait is around 70 minutes
Do you want to wait?
If Yes, please insert Y and you will queue up for the inserted location.
If No, please insert N and you can reinsert the new location that you want to go.
Enter your choice(Y/N): Y
You are queueing up for Pavilion.The time estimated to wait is around 70 minutes.Sorry for the inconvenient
Waiting.....

Thank you for waiting. You can enter Pavilion now.
Enter the distance with other in four direction(north, south, east, west)
North:
|
```

### ii. The user press y

```
Run: ProactiveSD x
The maximum capacity of the location has been reached.The average time per person to wait is around 70 minutes
Do you want to wait?
If Yes, please insert Y and you will queue up for the inserted location.
If No, please insert N and you can reinsert the new location that you want to go.
Enter your choice(Y/N): y
You are queueing up for Pavilion.The time estimated to wait is around 70 minutes.Sorry for the inconvenient
Waiting.....

Thank you for waiting. You can enter Pavilion now.
Enter the distance with other in four direction(north, south, east, west)
North:
```

## 7. The output when user press the N (N or n is accepted)

### i. The user press N

```
Run: ProactiveSD x
The maximum capacity of the location has been reached.The average time per person to wait is around 70 minutes
Do you want to wait?
If Yes, please insert Y and you will queue up for the inserted location.
If No, please insert N and you can reinsert the new location that you want to go.
Enter your choice(Y/N): N
Please choose your location that you want to go
Specification:1-5 are for location picking and 6 is to exit the program
1.Pavilion
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program

Selection:
```

## ii. The user press n

```
Run: ProactiveSD x
The maximum capacity of the location has been reached.The average time per person to wait is around 70 minutes
Do you want to wait?
If Yes, please insert Y and you will queue up for the inserted location.
If No, please insert N and you can reinsert the new location that you want to go.
Enter your choice(Y/N): n
Please choose your location that you want to go
Specification:1-5 are for location picking and 6 is to exit the program
1.Pavilion
2.Lotus
3.Mid Valley
4.Giant
5.The Garden
6.Exit the program
Selection: |
```

## 8.Output when user insert the invalid input in the Y/N option(error handling)

```
ProactiveSD x
Location's information:
ID:1
Location: Pavilion
Location's area: 9000 square meters
Maximum capacity of the location: 2250 people
Average time per person mostly stay: 70 minutes.

The maximum capacity of the location has been reached.The average time per person to wait is around 70 minutes
Do you want to wait?
If Yes, please insert Y and you will queue up for the inserted location.
If No, please insert N and you can reinsert the new location that you want to go.
Enter your choice(Y/N): lol
Invalid input!
Please reenter again(Y/N):
|
```

```
Run: ProactiveSD x
Location's information:
ID:1
Location: Pavilion
Location's area: 9000 square meters
Maximum capacity of the location: 2250 people
Average time per person mostly stay: 70 minutes.

The maximum capacity of the location has been reached.The average time per person to wait is around 70 minutes
Do you want to wait?
If Yes, please insert Y and you will queue up for the inserted location.
If No, please insert N and you can reinsert the new location that you want to go.
Enter your choice(Y/N): lol
Invalid input!
Please reenter again(Y/N): YES
Invalid input!
Please reenter again(Y/N):
```



9. Output when the user inserted the distance in four direction that more than or equal 2 meter (float number is allowed)

```
Run: ProactiveSD x
Enter the distance(in meter) with other in four direction(north, south, east, west)
North:
2
South:
2
East:
2
West:
2
Appreciate your effort in practicing social distancing! Good Job!

User's status:
Student ID:20297564
Name:Lee Boon Kah
Location ID:1
Location:Pavilion
Current Data:20/03/2022
Current Time:15:18:56
Status:Normal

Process finished with exit code 0
```

10. Output when the user inserted the distance in four direction that less than 2 meters (float number is allowed)

```
Run: ProactiveSD x
Enter the distance(in meter) with other in four direction(north, south, east, west)
North:
1
South:
2
East:
1
West:
2
Social distancing instruction:
Please move away from north by 1 meter
Please move away from east by 1 meter
```

```
Run: ProactiveSD x
Enter the distance(in meter) with other in four direction(north, south, east, west)
North:
2.5
South:
0.9
East:
0.5
West:
2
Social distancing instruction:
Please move away from south by 1.1 meter
Please move away from east by 1.5 meter
```

## 11. Output when the user inserted invalid input(error handling)

### i. negative number

```
Run: ProactiveSD x
Selection: 1
Your choice: 1
Location's information:
ID:1
Location: Pavilion
Location's area: 9000 square meters
Maximum capacity of the location: 2250 people
Average time per person mostly stay: 70 minutes.

The location's current capacity is 1405 person
You may enter the Pavilion.

Enter the distance(in meter) with other in four direction(north, south, east, west)
North:
-2
Please reenter a positive number!
North:
2
South:
```

### ii. string

```
ProactiveSD x
Selection: 1
Your choice: 1
Location's information:
ID:1
Location: Pavilion
Location's area: 9000 square meters
Maximum capacity of the location: 2250 people
Average time per person mostly stay: 70 minutes.

The location's current capacity is 936 person
You may enter the Pavilion.

Enter the distance(in meter) with other in four direction(north, south, east, west)
North:
-2
Please reenter a positive number!
North:
hello
That's not a number! Please enter a positive number!
North:
```

13. Output when the user inserted the distance in four direction that less than 2 meters and the random Boolean generator is true

```
Run: ProactiveSD x
Enter the distance(in meter) with other in four direction(north, south, east, west)
North:
1
South:
1
East:
1
West:
1
Social distancing instruction:
Please move away from south by 1 meter
Please move away from west by 1 meter

Since you did not practice social distance(around 2 meter) with another person and someone around you has been detected as close contact.
Hence your status will be set as causal contact!

User's status:
Student ID:20297564
Name:Lee Boon Kah
Location ID:2
Location:Lotus
Current Data:2022/03/20
Current Time:15:20:43
Status:Casual contact

Process finished with exit code 0
```

14. Output when the user inserted the distance in four direction that less than 2 meters and the random Boolean generator is false

```
Run: ProactiveSD x
Enter the distance(in meter) with other in four direction(north, south, east, west)
North:
1
South:
1
East:
1
West:
1
No one surrounding you had been detected as close contact.
Please make sure that you follow the instruction below to practice social distancing.
Social distancing instruction:
Please move away from north by 1 meter
Please move away from west by 1 meter

User's status:
Student ID:20297564
Name:Lee Boon Kah
Location ID:2
Location:Lotus
Current Data:20/03/2022
Current Time:15:24:03
Status:Normal

Process finished with exit code 0
```