AICP Internship Task Week 4

Hexagon is a geometrical shape having six sides while square is a shape which has four equal sides. You are required to write Python or C++ program for hexagon and square having data members and member functions, and create a repeating menu keeping in mind the following requirements:

1. Consider last digit of your CNIC as the length of one side of hexagon. For example, if your CNIC is XY210351532, the last digit will be 2.
2. Calculate area and perimeter of hexagon. (Hint: Area of hexagon= 1.5*1.732*s ; where 's' is the length of one side of hexagon. Perimeter of hexagon= 6*s; where 's' is the length of one side of hexagon)
3. Calculate sum of all the angles of hexagon. (Hint: Sum of all the angles of hexagon= $6*a^2$; where 'a' is the measurement of one angle of hexagon which is equal to 120.)
4. When the input of user is '1', display area, perimeter and sum of all the angles of hexagon.
5. Calculate area and perimeter of square whereas;
    a. Length of one side of square=last digit of CNIC + 1. (Hint: Area of square= (length)2; where 'length' is the length of one side of square. Perimeter of square= 4*length; where 'length' is the length of one side of the square.)
6. When the input of user is '2', display the area and perimeter of the square.
7. On any other input, the program should exit.

Instructions to write the program:

- Use the last digit of your own CNIC. If you do not use it, your marks will be deducted.
- Write member functions to calculate and display area, perimeter, and sum of angles of the hexagon. The following function names should be used for consistency in the hexagon class.

To calculate area of hexagon	**calcArea();**
To calculate Perimeter of hexagon	calcPeri();
To calculate Sum of angles of hexagon	calcAngleSum();
To display area, perimeter, and sum of angles of hexagon	display();

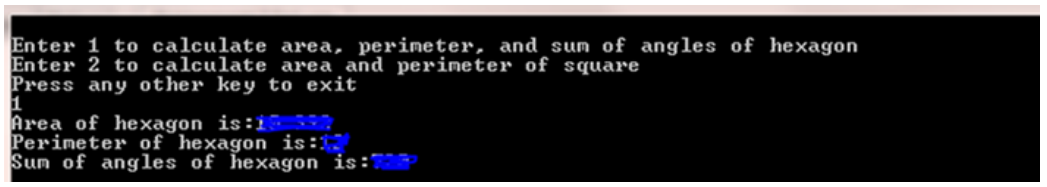
- Write member functions to calculate and display area and perimeter of square. Following function names should be used for consistency in square class.

- Write member functions to calculate and display area and perimeter of square. Following function names should be used for consistency in square class.

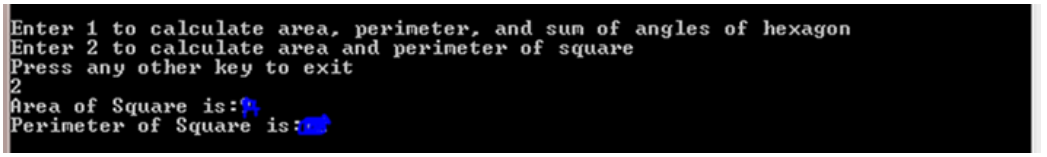
To calculate area of Square	**calcAreaSquare();**
To calculate Perimeter of Square	**calcPeriSquare();**
To display area and perimeter of Square	**display();**

2

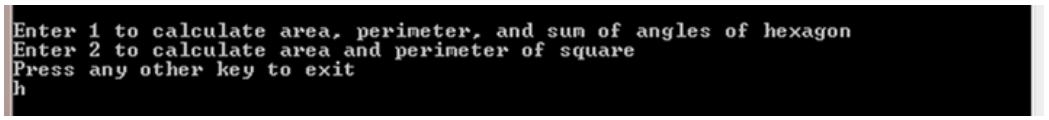
When input is 1:



When input is 2:



When any other input it terminates:



Sample Output:

When 1 is pressed

```
My Student ID is XY12345678
Enter your choice
Press 1 to display the bill of slab 1 and slab 2.
Press 2 to display the bill of slab 3.
Press any other key to exit.
1
Bill for Slab 1 is
550     650     750
Bill for Slab 2 is
1800    2250    2550
```

When 1 is pressed

```
My Student ID is XY12345678
Enter your choice
Press 1 to display the bill of slab 1 and slab 2.
Press 2 to display the bill of slab 3.
Press any other key to exit.
2
Bill for Slab 3 is
4200    4600    4800
```

When anyother key is pressed, program is terminated.

```
My Student ID is XY12345678
Enter your choice
Press 1 to display the bill of slab 1 and slab 2.
Press 2 to display the bill of slab 3.
Press any other key to exit.
3
```