

Exercise 1

PP 1

Print the following output with only one line of code and using only print and scape sequences.

```
A
 AAA
AAAAA
  AAA
A
```

PP 2

Print the following output with one line of code.

```
_It's my name – Rubina Joshi.
And I Studied in IOE Campus_
```

PP 3

Print the following output with one line of code.

```
Day"s and \night
```

PP 4

Given the string1 = "HELLOW WORLD"

- print last character
- print 4th character
- what will output if your try to run this command print(string1[16])

PP 5

Given string "PYTHON TUTORIAL", print THRIA using using string slicing and cancantinating them.

PP 6

n! is defined as $n * (n-1) * (n-2) * \dots * 1$.

Find 5! and 10! using integer and * operator and print them as follows.

5! = 120

10! = 3628800

PP 7

Receive a radius value from the user and print the circumference and area of a circle with this radius that follows. Use the variable PI= 3.141592 to obtain this value.

Example

Enter the radius of a circle: 11

Circumference of a circle= 69.115024, Area of a circle= 280.132632

Note

Circumference of a circle: $2 * \text{radius} * \text{PI}$

Area(Surface) of a circle: $\text{PI} * \text{radius} * \text{radius}$

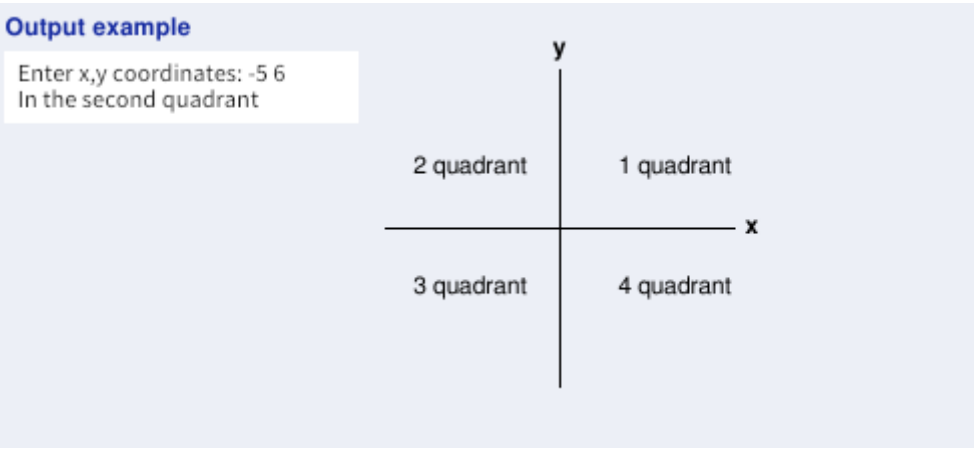
PP 8

Write a program that displays the squared values from 2 to 6 in a table as the following. As shown below, a can be increased from 2 to 6, and n has a value of 2. Input the actual value for the part corresponding to $a^{**}n$, so that the output result of the equation is $2^{**}2$.

Example Result	a	n	a ** n
	2	2	4
	3	2	9
	4	2	16
	5	2	25
	6	2	36

PP 9

Write a program that receives a point with x and y coordinates as input, and determines in which quadrant among 1, 2, 3, 4 the point belongs. The position of the quadrant is shown in the following figure.



PP 10

Develop a menu ordering program for Yummy Restaurant. Show the following menu to the user and let the user select one. If the given input alphabet is not in the menu, print 'enter the menu again:' and receive another input.

Welcome to yummy restaurant. Here is the menu.

- Burger(enter b)
- Chicken(enter c)
- Pizza(enter p)

Choose a menu (enter b,c,p) : b

You chose pizza.

PP 11

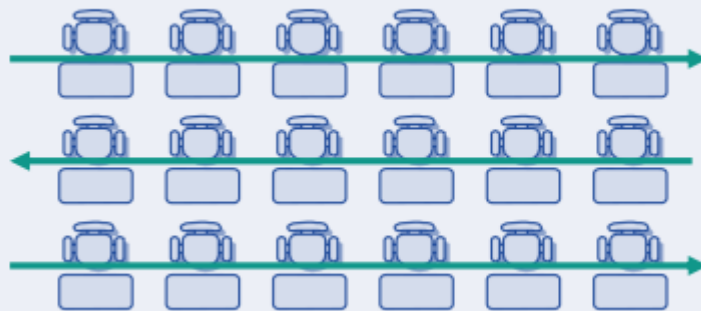
print the biggest number from given three numbers.

PP 12

Agency A is planning to issue tickets of a concert hall for idol singers' concert. Here, the number n is the input and the seat number is arranged as follows. $n * n$ seats are placed when n is given as input. The below arrangement of the seat numbers is called a snake matrix because the array increases in ones in the shape of a snake's trunk. Write a program that produces arrays of these numbers.

Output Example

```
Enter n : 5
1  2  3  4  5
10 9  8  7  6
11 12 13 14 15
20 19 18 17 16
21 22 23 24 25
```



PP 13

Generate the following output- using loop.

_output

```
7
77
777
7777
77777
```

PP 14

output (arbitrary number of lines) :

```
1
2 3
```

```
4 5 6
7 8 9 10
```

PP 15

output (arbitrary number of lines) :

```
6 5 4
3 2
1
```

PP 16

output: generate fibonacci series

```
0,1,1,2,3,5,8,13,...
```

PP 17

output 6: reverse the given string

```
suresh => hserus
```

PP 18

A palindrome number refers to an integer whose value is the same as its original value, even if listed upside down, such as 121 or 3443. Write the following program to determine whether the number is a palindrome number or not by receiving the number n from the user.

125 => Not palindrome

3443 => Palindrome

PP 19

The computer has a random integer between 1 and 100 as the correct answer value as following. When the user presents the correct answer, the program only informs whether the presented integer is higher or lower compared to the correct answer he or she stored. This game is repeated until the user answers correctly.

```
Guess a number between 1 to 100
Enter a number: 50
Lower!
Enter a number: 40
Higher!
Enter a number: 51
Higher!
Enter a number: 45
Lower!
Enter a number: 4
Congratulations. Total try = 5
```

PP 20

output:

```
T
TTT
TTTTT
TTT
T
```

PP 21

Take a year as input and check if it is a leap year. A leap year is a year divisible by 4 but not

PP 22

- Write a program to calculate BMI of a person. Take height in cm and weight in kg as input and calculate the BMI.

BMI is calculated as

$$\text{BMI} = \text{Weight} / (\text{Height in m})^2$$

Based on the BMI then print the nutritional status of the person. Take this chart as a reference

BMI	Nutritional status
Below 18.5	Underweight
18.5–24.9	Normal weight
25.0–29.9	Pre-obesity
30.0–34.9	Obesity class I
35.0–39.9	Obesity class II
Above 40	Obesity class III

PP 23

Ask the user to enter their age. If it is between 13 and 19 tell them they are in their teenage

PP 24

Write a program to play the fizbuzz game till 100. In fiz buzz you go from 1 to number N. If the number is divisible by 3 you call it as fiz, if it is divisible by 5 you will call it buzz and if it is divisible by both 3 and 5 you call it fizbuzz

Your output should look something like this

```
1, 2, fiz, 4, buzz, .... 14, fizbuzz, 16, ...
```

PP 25

Write a program to print prime numbers till 100. A prime number is a positive number that is divisible by two numbers 1 and itself only and no other numbers.[Optional explore if you can use else with for loop to find prime numbers]