



United Arab Emirates  
Ministry of Education



الإمارات العربية المتحدة  
وزارة التربية والتعليم

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مدرسة المجد النموذجية للتعليم الأساسي ح2

عام  
زايد



YEAR OF  
ZAYED

السَّابِع

# DESIGN AND TECHNOLOGY

python

# 7

1 - Write code in a new python to print numbers 1 through 7 using command **For** and command **While** ?

Write a suitable **comment** in line number 1 .

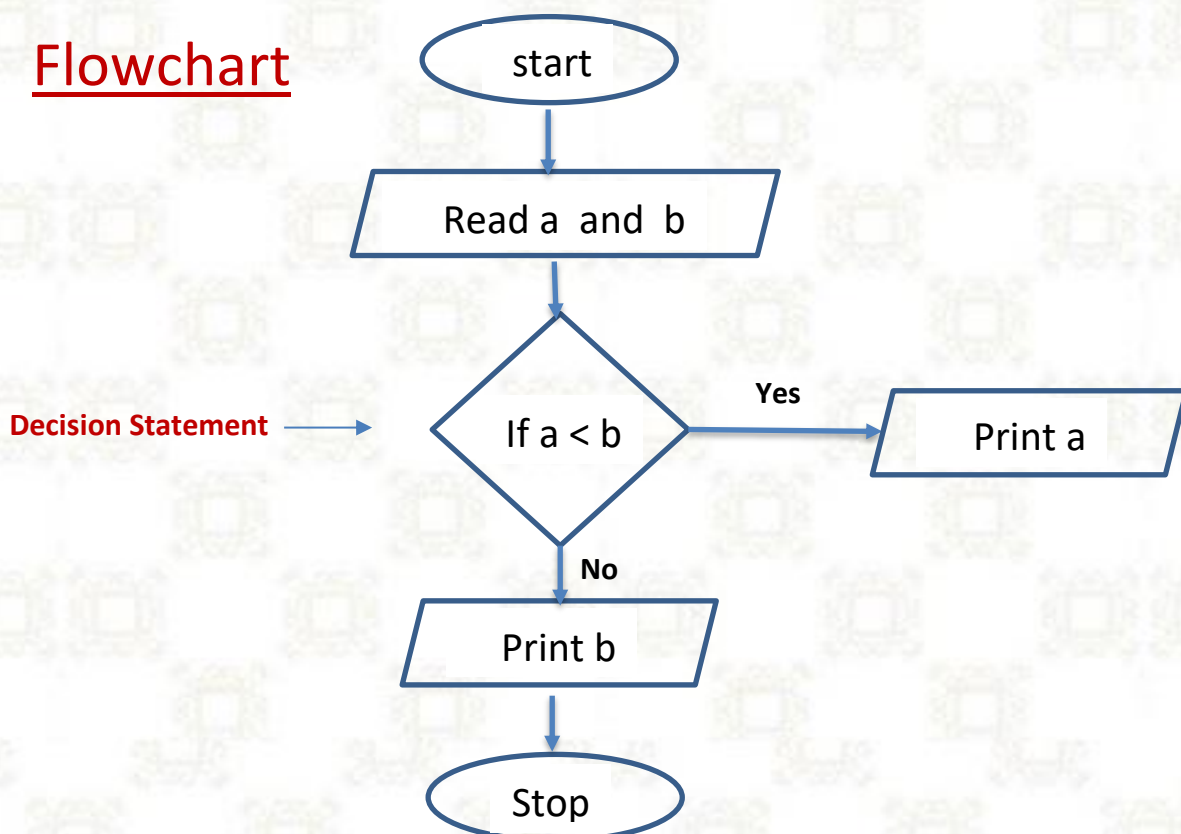
```
#This program uses a for loop to count numbers from 1 to 7  
for n in range (1,8,1):  
    print(n)
```

```
#This program uses a while loop to count numbers from 1 to 7  
n=1  
while (n<8):  
    print(n)  
    n=n+1
```

2 - Write code in a new python to Print the **smaller** of two numbers ? Write a suitable comment in line 1 ?

```
#to find the smaller of two numbers  
a=input("Enter first number :")  
b=input("Enter second number :")  
if (a<b):  
    print("a is the smaller number")  
else:  
    print ("b is the smaller number")
```

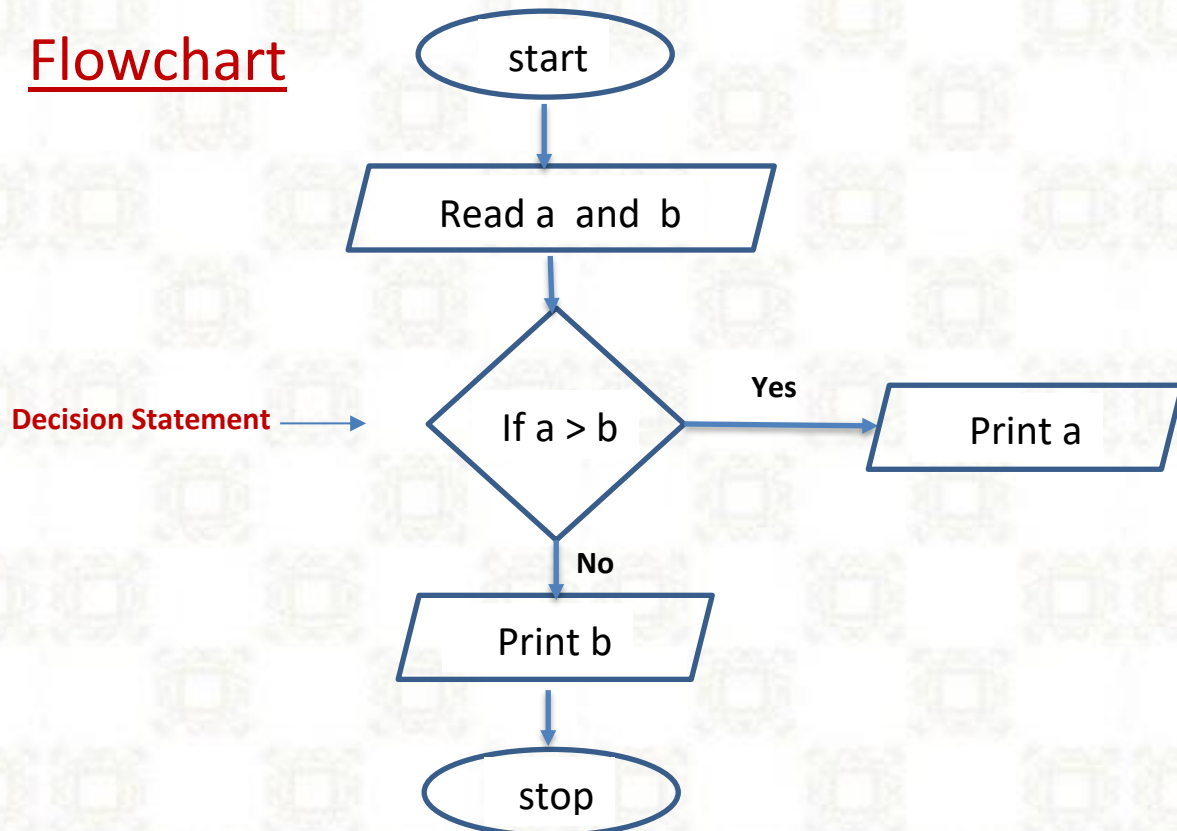
## Flowchart



3 - Write code in a new python to Print the **Largest** of two numbers ? Write a suitable comment in line 1 ?

```
#to find the largest of two numbers  
a=input("Enter first number :")  
b=input("Enter second number :")  
if(a>b):  
    print("a is the largest number")  
else:  
    print ("b is the largest number")
```

### Flowchart



4 - Write code in a new python ( Using for loop ) to calculate and print the age and year of the user for the next 5 years ? Write a suitable comment in line 5 ?

```
age = input("Enter your age:")
age = int(age)
year = input("Enter the current year:")
year = int(year)
#This is the loop to calculate and print their
age and year for the next 5 years
for num in range(1, 6, 1):
    age = age + 1
    year = year + 1
    print("year is ", year, "age is ", age)
```

5 – The program in Task 4 can also be written using a while loop .

```
age = input("Enter your age : ")
age = int(age)
year = input("Enter the current year : ")
year = int(year)
count = 1
while (count < 6):
    age = age + 1
    year = year + 1
    print("year is ", year, "age is ", age)
    count = count + 1
```

6 - Write code in a new python ( Using for loop ) to count even numbers from 0 to 20 ? Write a suitable comment in line 1 ?

```
#This program uses a for loop to count even numbers from 0 to 20  
for num in range (0,21,2):  
    print(num)
```

7 – The program in Task 6 can also be written using a while loop .

```
#This program uses a for loop to count even numbers from 0 to 20  
num=0  
while (num<21):  
    print(num)  
    num=num+2
```

8 - Write code in a new python ( Using for loop ) to count even numbers from 1 to 20 ? Write a suitable comment in line 1 ?

```
weather = input("Enter the weather :")  
if (weather == "sunny"):  
    print ("go to the beach")  
elif (weather == "cloudy"):  
    print ("go to the cinema")  
else:  
    print ("stay at home")
```

9 - Write code in a new python to ask if the users speaks Arabic or No but also allow them to say a little, finally we will tell them if they type anything else we will tell them they did not answer the question. ? Write a suitable comment in line 1,2,3,4 ?

```
#YES : MARHABA
#NO : YOU DON'T ! YOU SHOULD LEARN ARABIC
#A LITTLE : A LITTLE IS A GOOD START
#ANYTHING : YOU DID NOT ANSWER THE QUESTION
Answer=input ("do you speak arabic ? Type yes ,
no or a little .")
if Answer == "yes" :
    print("marhaba")
elif Answer=="no":
    print("you don't! you should learn arabic
")
elif Answer=="a little":
    print("a little is a good start")
else:
    print("you did not answer the question")
```

10 - Create a program to solve this problem. Hamad wants to carpet his new room with green carpet . Create a program that will ask him for the two dimensions of a room (length and width) and then calculate the area of the room, (length x width) ? Write a suitable comment in line 1 ?

```
#This program calculate the area of the room
L=input ("What is the length of the room?")
W=input ("What is the width of the room?")
A=int (L) *int (W)
print ("The total area of the room is :" , A)
```

11- What will be the correct output for this for loop?

```
for i in range(0,4):  
    print(i)
```

- A) 1, 2, 3
- B) 0, 1, 2, 3
- C) 0, 1, 2, 3, 4

12 - Write down the three variables used in this block of code

```
firstNumber = 1  
firstNumber = firstNumber * 3  
secondNumber = 3  
secondNumber = secondNumber - 2  
finalsum = firstNumber + secondNumber  
print(finalsum)
```

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```
number = input("Type a number from 0 to 10")
```

```
if number > 5:  
    print("Number is greater than 5")
```

```
elif number == 5:  
    print("Number is 5")
```

```
else:  
    print("Number is less than 5")
```

13 -What is the output for the above code when the:

- A) number is 10?
- B) number is 0?
- C) number is 5?

(A) \_\_\_\_\_

(B) \_\_\_\_\_

(C) \_\_\_\_\_

14 - Name any three Python functions.

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15 - Match the terms with its explanations. Write the matching letter in the correct box.

1. *		Not equal to	A
2. >=		Multiply	B
3. !=		Greater than or equal to	C

16 - Which of these will correctly appear as a **comment** in Python?

- A) == This is a line of code
- B) % This is a line of code
- C) # This is a line of code

17 - Create a program to print the multiplication table as the user chooses.

```
table=int(input("Which times table do you want?"))
for i in range(0,12):
    print (i, "X", table, " = ",i*table)
```

## \* Print Function

Command	Function	Example /code	output
print(" ")	To print /output what written inside brackets	print("hello")	hello
print( )	To print the result of operation	print(5+3)	8
		print(10-3)	7
		print(15/5)	3
		print(4*3)	12
print(" ", )	To print the combination of text and numbers	print("sum=" , 2+1)	Sum= 3

**\* Match the terms with its explanations. Write the matching letter in the correct box.**

Debugging	<b>A</b>	Finding the problems in code and removing the bugs.	<b>A</b>
Function	<b>C</b>	when you try and run the program and it will not run spelling mistake, or missed a character out	<b>B</b>
Output	<b>D</b>	python knows what print() means and does display on the screen what written in between brackets	<b>C</b>
String	<b>F</b>	When something is processed by the computer and returned back	<b>D</b>
Variable	<b>E</b>	box that you can save information inside and to store data that you might need saving or to refer to later in a program.	<b>E</b>
Input()	<b>H</b>	is a data type used in programming and to represent text .	<b>F</b>
Float	<b>G</b>	is a decimal number such as 0.8	<b>G</b>
integer	<b>I</b>	built in function that it can be given a string which it sends to the screen	<b>H</b>
while loop	<b>K</b>	is a whole number such as 5.	<b>I</b>
for loop	<b>L</b>	You can use one or more loop inside any another loop.	<b>J</b>
		Repeats a statement or group of statements while a given condition is TRUE. It tests the condition before executing the loop body.	<b>K</b>
		Executes a sequence of statements defined number of times and abbreviates the code that manages the loop variable.	<b>L</b>

**\* Choose and circle the correct answer – A, B, C or D.**

1. What is a string?

- A) A pseudocode
- B) A comparative operator
- C) A series of characters**
- D) A series of numbers

2. What is an algorithm?

- A) A sequence of instructions**
- B) A box to store instructions
- C) A box to store instructions
- D) A build in function

3. What does the operator \* do?

- A) Subtract
- B) Multiply**
- C) Divide
- D) Modulus

4. What does the operator != means?

- A) Assign value
- B) Not assign
- C) Equal
- D) Not Equal**

5. Anything in speech marks "" is treated as:

- A) Float Number
- B) Integer Number
- C) text**
- D) Array

Which statement will check if a is less than b?

- ☐ if a >= b
- ☐ if a > b
- ☐ if a <= b:
- ☐ if (a < b)
- ☐ if a < b
- ☒ if a < b: ✓
- ☐ if a less than b:

Which statement will check if a is equal to b?

- ☐ if a equals b:
- ☐ if a === b
- ☐ if a = b:
- ☐ if a = b
- ☐ if a == b
- ☒ if a == b: ✓
- ☐ if a === b: