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| C:\Users\logon\Desktop\download.jfif | DEPARTMENT OF COMPUTER ENGINEERING |

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| Subject: Programming with Python | Subject Code:22616 |
| Semester:6th Semester | Course: Computer Engineering |
| Laboratory No: L001B | Name of Subject Teacher: Sangeeta Shirsat |
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| Experiment No: | 3 |
| Title of Experiment | Write simple Python program using operators: Arithmetic Operators, Logical Operators, Bitwise Operators |

**X. PRACTICAL RELATED QUESTIONS**

**1. Mention the use of //, \*\*, % operator in Python.**

**ANS:**

**a] Code:**

i] //

a = 10

b = 5

print("Floor Division : " , (a//b))

ii] \*\*

a = 10

b = 5

print("Exponent : " , (a\*\*b))

iii] %

a = 10

b = 5

print("Modulus : " , (a%b))

**b] Output:**

A computer screen shot of a computer code

Description automatically generated

**2. Describe ternary operator in Python**

**Ans:**

**a] Code:**

age = 16

result = "You can drive" if age>18 else "You cannot Drive"

print(result)

**b] Output:**

A computer screen with white text

Description automatically generated

**3. Describe about different Logical operators in Python with appropriate examples.**

**Ans:**

**a] Code:**

a = True

b = False

c = True

if a and c:

print("Both a and c are True (AND condition).")

if b or c:

print("Either b or c is True (OR condition).")

if not b:

print("b is False (NOT condition).")

**b] Output:**

A computer screen shot of a program

Description automatically generated

**4. Describe about different Arithmetic operators in Python with appropriate examples**

**Ans:**

**a] Code:**

num1=40

num2=10

print("number 1 :", num1)

print("number 2 :", num2)

print("Addition of " , num1 , " + " , num2 , " = " , (num1+num2))

print("Subtraction of " , num1 , " - " , num2 , " = " , (num1-num2))

print("Multiplication of " , num1 , " \* " , num2 , " = " , (num1\*num2))

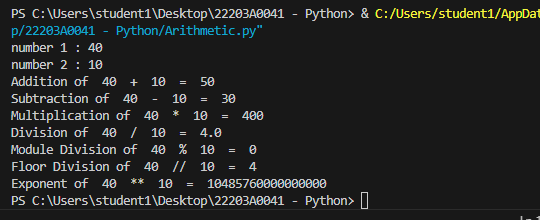
print("Division of " , num1 , " / " , num2 , " = " , (num1/num2))

print("Module Division of " , num1 , " % " , num2 , " = " , (num1%num2))

print("Floor Division of " , num1 , " // " , num2 , " = " , (num1//num2))

print("Exponent of " , num1 , " \*\* " , num2 , " = " , (num1\*\*num2))

**b] Output:**



**5. Describe about different Arithmetic operators in Python with appropriate examples**

**Ans:**

**a] Code:**

role = 0b1001

hr = 0b1011

admin = 0b1001

manager = 0b1100

if(hr & role):

print("You are HR")

elif(admin & role):

print("your role is Admin")

else:

print("Your role is Manager")

**b] Output:**

A computer screen shot of a computer code

Description automatically generated

**XI. Exercise**

**1. Write a program to convert U.S. dollars to Indian rupees.**

**Ans:**

**a] Code:**

dollar = float(input("Enter Dollar Amount : "))

print("Entered Dollar Amount : " , dollar)

print("$ : " , dollar)

print("₹ : " , dollar\*86.28)

**b] Output:**

A computer screen shot of a computer code

Description automatically generated

**2. Write a program to convert bits to Megabytes, Gigabytes and Terabytes.**

**Ans:**

**a] Code:**

bit = int(input("Enter bit number: "))

print("Your Entered bit is : " , bit)

byte = bit/8

kb = byte/1024

mb = kb/1024

gb = mb/1024

tb = mb/1024

print("Megabytes : " , mb )

print("Gigabytes : " , gb )

print("Terabytes : " , tb )

**b] Output:**

A computer screen shot of a computer code

Description automatically generated

**3.** **Write a program to find the square root of a number.**

**Ans:**

**a] Code:**

num = float(input("Enter a number: " ))

print("Your Entered number is : " , num)

print("Square Root of " , num , "is : " , (num \*\* 0.5))

**b] Output:**

A computer screen shot of a computer code

Description automatically generated

**4.** **Write a program to find the area of Rectangle.**

**Ans:**

**a] Code:**

len = float(input("Enter Length : " ))

bre = float(input("Enter Breadth : " ))

aor = len \* bre

print("Area of a Rectangle is : " , aor )

**b] Output:**

A computer screen shot of a program

Description automatically generated

**5.** **Write a program to calculate area and perimeter of the square**

**Ans:**

**a] Code:**

side = float(input("Enter side of a square : "))

area = side \* side

per = 4 \* side

print("Area of a Square is : " , area)

print("Perimeter of a Square is : " , per)

**b] Output:**

A computer screen shot of a computer code

Description automatically generated

**6.** **Write a program to calculate surface volume and area of a cylinder.**

**Ans:**

**a] Code:**

pi = 22/7

height = float(input("Enter Height of Cylinder : "))

radius = float(input("Enter Radius of Cylinder : "))

volume = pi \* radius \* radius \* height

area = (2 \* pi \* radius \* height) + (2 \* pi \* radius \*\* 2)

print("Volume of Cylinder : " , volume)

print("Area of Cylinder : " , area)

**b] Output:**

A computer screen shot of a program

Description automatically generated

**7.** **Write a program to swap the value of two variables.**

**Ans:**

**a] Code:**

x = float(input("Enter first number: "))

y = float(input("Enter second number : "))

print("Before Swapping : ")

print(x)

print(y)

temp = x

x = y

y = temp

print("After Swapping : ")

print(x)

print(y)

**b] Output:**

A computer screen shot of a program

Description automatically generated