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| **Practice Programs for Week-2** | |
| **1.** | **Implement python solution to perform all arithmetic operations on integer inputs.**   1. **addition ii) subtraction iii)multiplication iv) division v) modulo division** 2. **truncating division vii) exponent**   #Week-3 Prog No.1  #Arithmetic Operations  print("Arithmetic Operations Demo")  a=int(input("enter a"))  b=int(input("enter b"))  c=a+b  d=a-b  e=a\*b  f=a/b  g=a%b  h=a\*\*b  i=a//b  print("Addition of a and b is",c)  print("Subtraction of a and b is",d)  print("Multiplication of a and b is",e)  print("Division of a and b is",f)  print("Modulo Divison of a and b is",g)  print("Exponent of a to b is",h)  print("Truncating division of a and b is",i)  Output  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  Arithmetic Operations Demo  enter a5  enter b7  Addition of a and b is 12  Subtraction of a and b is -2  Multiplication of a and b is 35  Division of a and b is 0.7142857142857143  Modulo Divison of a and b is 5  Exponent of a to b is 78125  Truncating division of a and b is 0 |
| **2.** | **Implement python solution to perform complex number addition, subtraction, multiplication and division.**  #Week-3 Prog No.2  #Complex Numbers Operations  print("Complex Numbers Operations Demo")  a=complex(input("enter a"))  b=complex(input("enter b"))  c=a+b  d=a-b  e=a\*b  f=a/b  print("Addition of Two Complex Numbers a and b is",c)  print("Subtraction of Two Complex Numbers a and b is",d)  print("Multiplication of Two Complex Numbers a and b is",e)  print("Division of Two Complex Numbers a and b is",f)  Output  \*\*\*\*\*\*\*\*\*\*\*  Complex Numbers Operations Demo  enter a2+4j  enter b5+7j  Addition of Two Complex Numbers a and b is (7+11j)  Subtraction of Two Complex Numbers a and b is (-3-3j)  Multiplication of Two Complex Numbers a and b is (-18+34j)  Division of Two Complex Numbers a and b is (0.5135135135135136+0.08108108108108109j) |
| 3. | Write a python program that prompts the user for two integer values and displays the result of the number divided by second, with exactly two decimal places displayed.  #Week-3 Prog No.3  #Division with Precision  first=int(input("enter first number"))  second=int(input("enter second number"))  div=first/second  print("Division of Two Numbers with precision two decimal places is:",format(div,'.2f'))  Output  \*\*\*\*\*\*\*\*\*  enter first number7  enter second number9  Division of Two Numbers with precision two decimal places is: 0.78 |
| **4.** | **Write a python program that prompts the user for two floating point values and displays the result of the first number divided by the second, with exactly six decimal places displayed.**  #Week-3 Prog No.4  #Division with Precision  first=float(input("enter first number"))  second=float(input("enter second number"))  div=first/second  print("Division of Two Numbers with precision two decimal places is:",format(div,'.6f'))  Output  \*\*\*\*\*\*\*\*\*  enter first number5.2  enter second number7.5  Division of Two Numbers with precision two decimal places is: 0.693333  #Week-3 Prog No.4  #Division with Precision(IEEE Format)  first=float(input("enter first number"))  second=float(input("enter second number"))  div=first/second  print("Division of Two Numbers with precision two decimal places is:",format(div,'.6e'))  enter first number2.5  enter second number7.2  Division of Two Numbers with precision two decimal places is: 3.472222e-01 |
| 5. | Implement python solution that prompts the user to enter an upper or lower case letter and displays corresponding Unicode character.  #Week-3 Prog No.5  #unicode character  c=input("enter character ")  print("Unicode for reading character",c,"is: ",ord(c))  output  \*\*\*\*\*\*\*\*\*  enter character a  Unicode for reading character a is: 97 |
| **6.** | **Write a python program that allows the user to enter any integer value, and displays the value of 2 raised to that power. Your program should function as shown below.**  ***What power of Two? 10***  ***Two to the power of 10 is 1024***  #Week-3 Prog No.6  #POWER OF 2  c=int(input("WHAT POWER OF 2 "))  pow2=2\*\*c  print("TWO TO THE POWER OF",c,"IS",pow2)  Output  \*\*\*\*\*\*\*\*\*\*  WHAT POWER OF 2 10  TWO TO THE POWER OF 10 IS 1024 |
| 7. | Write a python solution that allows the user to enter any integer base and integer exponent, and displays the value of the base raised to that exponent. Your program should function as follows.  *What base?10*  *What power of 10?4*  *10 to the power of 4 is 10000*  #Week-3 Prog No.7  #POWER OF any exponent  b=int(input("WHAT BASE "))  print("WHAT POWER OF",b,"?")  e=int(input())  pow=b\*\*e  print(b,"TO THE POWER OF",e,"IS",pow)  Output  \*\*\*\*\*\*\*\*\*\*\*\*\*  WHAT BASE 10  WHAT POWER OF 10 ?  4  10 TO THE POWER OF 4 IS 10000 |
| **8.** | ***Implement a python solution to find the volume of sphere with radius r.***  ***Hint: Volume of sphere =***  #Week-3 Prog No.8  #Volume of Sphere  import math as m  r=int(input("Enter Radius: "))  vol=(4/3)\*m.pi\*r\*\*3  print("Volume of Sphere is",vol)  Output  \*\*\*\*\*\*\*\*\*\*\*\*  Enter Radius: 5  Volume of Sphere is 523.5987755982989 |
| **9.** | **Write a python program that asks to enter any three numbers. Create a variable called total and average that hold the sum and average of the three numbers and print out the values of total and average.**  #Week-3 Prog No.9  #Sum and Average  a=int(input("Enter a"))  b=int(input("Enter b"))  c=int(input("Enter c"))  total=a+b+c  average=total/3  print("Total of a,b,c is",total)  print("Average of a,b,c is",average)  Output  \*\*\*\*\*\*\*\*\*\*\*\*\*  Enter a7  Enter b8  Enter c9  Total of a,b,c is 24  Average of a,b,c is 8.0 |