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**Unit; Data Communication**

**Assignment II**

1. Definition
2. Polymorphism

is the characteristic of being able to assign a different meaning or usage to something in different contexts - specifically, to allow an entity such as a variable, a function, or an object to have more than one form.

1. Inheritance

is the concept that when a class of objects is defined, any subclass that is defined can inherit the definitions of one or more general classes.

1. Abstraction

is the process of taking away or removing characteristics from something in order to reduce it to a set of essential characteristics.

1. Encapsulation

in general, encapsulation is the inclusion of one thing within another thing so that the included thing is not apparent.

1. Function

a function is a body of code that returns a value.

the value returned may depend on arguments provided to the function.

1. Python program to calculate compound interest

A = P(1 + R/100)T

Where,

A is the amount of money accumulated after n years, including interest.

P is the principal amount

R is the rate and

T is the time span

def compound\_interest (principle, rate, time):

result = principle \* (pow((1 + rate / 100), time))

return result

p = float (input("Enter the principal amount: "))

r = float (input("Enter the interest rate: "))

t = float (input("Enter the time in years: "))

amount = compound\_interest(p, r, t)

interest = amount - p

print ("Compound amount is %.2f" % amount)

print ("Compound interest is %.2f" % interest)

1. A python function to covert temperature to and from, Celcius, Fahrenheit

Celsius = (Fahrenheit – 32) \* 5/9

Fahrenheit = (Celsius \* 9/5) + 32

*Celcius to Fahrenheit*

celsius = float (input("Enter temperature in celsius: "))

fahrenheit = (celsius \* 9/5) + 32

print('%.2f Celsius is: %0.2f Fahrenheit' %(celsius, fahrenheit))

*Fahrenheit to Celcius*

fahrenheit = float (input("Enter temperature in fahrenheit: "))

celsius = (fahrenheit - 32) \* 5/9

print ('%.2f Fahrenheit is: %0.2f Celsius' %(fahrenheit, celsius))

1. A python program to find the max of 3 numbers

# Python program to find the largest number among the three numbers

def maximum (a, b, c):

if (a >= b) and (a >= b):

largest = a

elif (b >= a) and (b >= a):

largest = b

else:

largest = c

return largest

# Driven code

a = 10

b = 14

c = 12

print (maximum(a, b, c))

1. A python program to print the even numbers from a given list [1, 2, 3, 4, 5, 6, 7, 8, 9]

# Python program to print Even Numbers in a list of numbers

list1 =

# iterating each number in list

for num in list1: [1, 2, 3, 4, 5, 6, 7, 8, 9]

# checking condition

if num % 2 == 0:

print(num, end = " ")