Oops task – 5 ,20bcs002(abhishek dubey)

1)

from abc import abc, abstractmethod

import math

class shape(abc):

def \_init\_(self, shape):

self.shape = shape

@abstractmethod

def area(self):

pass

class rectangle(shape):

def \_init\_(self, length, breadth):

shape.\_init\_(self, 'rectangle')

self.length = length

self.breadth = breadth

def area(self):

return self.length\*self.breadth

class circle(shape):

def \_init\_(self, radius):

shape.\_init\_(self, 'circle')

self.radius = radius

def area(self):

return round((math.pi)(self.radius\*2),2)

class square(shape):

def \_init\_(self, side):

shape.\_init\_(self, 'square')

self.side = side

def area(self):

return self.side\*self.side

sq = square(9)

print("area of square :", sq.area())

rect = rectangle(6,7)

print("area of rectangle:", rect.area())

c = circle(8)

print("area of circle :", c.area())

2)

class travel:

def \_init\_(self, travel):

self.travel = travel

def number\_of\_passangers(self):

pass

def distance(self):

pass

def mode(self):

pass

class train(travel):

def \_init\_(self, total\_passangers):

self.total\_passangers = total\_passangers

def cost\_of\_transport(self):

print('cost of transport by train is',self.total\_passangers\*60)

class bus(travel):

def \_init\_(self, total\_passangers):

self.total\_passangers = total\_passangers

def cost\_of\_transport(self):

print('cost of transport by bus is',self.total\_passangers\*100)

mode1 = train(12)

mode1.cost\_of\_transport()

mode2 = bus(12)

mode2.cost\_of\_transport()

3)

class car:

def \_init\_(self,carnumber):

self.carnumber=carnumber

c1=car(1998)

c2=car(2002)

print('the model number of c1 is',c1.carnumber)

print('the model number of c2 is',c2.carnumber)

print('--------------------------------')

def carnumswap():

c1.carnumber,c2.carnumber=c2.carnumber,c1.carnumber

print("the model number of c1 is ",c1.carnumber)

print("the model number of c2 is ",c2.carnumber)

carnumswap()