**Co3 programs**

**Graphics**

**area**

pi=3.14

def area(r):

print(r\*r\*pi)

def perimeter(r):

print(2\*pi\*r)

rectangle

def area(a,b):

print(a\*b)

def perimeter(a,b):

print(2(a+b))

graphics usage

from graphics import area

from graphics import rectangle

r=int(input("enter the r"))

area.area(r)

area.perimeter(r)

a=int(input("enter a "))

b=int(input("enter b"))

rectangle.area(a,b)

rectangle.peremeter(a,b)

**output**

enter r4

50.24

25.12

enter a6

enter b5

30

22

**functions**

k=45

def sum(x,y):

print(x+y)

def average(x,y):

return((x+y)/2)

def power(x,y):

return(x\*\*y)

name

def name(name):

return name

init

\_\_init\_\_

**Packageusage**

from mypackage import functions

from mypackage import name

print(functions.k)

functions.sum(2,3)

print(name.name("happy"))

**output**

45

5

Happy

**Calendar**

**import calendar**

**yy=int(input("enter year:"))**

**mm=int(input("enter month:"))**

**print(calendar.month(yy, mm))**

**print(calendar.calendar(2000))**

**Output**

**enter year:2000**

**enter month:12**

**March 2000**

**Mo Tu We Th Fr Sa Su**

**1 2 3 4 5**

**6 7 8 9 10 11 12**

**13 14 15 16 17 18 19**

**20 21 22 23 24 25 26**

**27 28 29 30 31**

**2000**

**January February March**

**Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su**

**1 2 1 2 3 4 5 6 1 2 3 4 5**

**3 4 5 6 7 8 9 7 8 9 10 11 12 13 6 7 8 9 10 11 12**

**10 11 12 13 14 15 16 14 15 16 17 18 19 20 13 14 15 16 17 18 19**

**17 18 19 20 21 22 23 21 22 23 24 25 26 27 20 21 22 23 24 25 26**

**24 25 26 27 28 29 30 28 29 27 28 29 30 31**

**31**

**April May June**

**Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su**

**1 2 1 2 3 4 5 6 7 1 2 3 4**

**3 4 5 6 7 8 9 8 9 10 11 12 13 14 5 6 7 8 9 10 11**

**10 11 12 13 14 15 16 15 16 17 18 19 20 21 12 13 14 15 16 17 18**

**17 18 19 20 21 22 23 22 23 24 25 26 27 28 19 20 21 22 23 24 25**

**24 25 26 27 28 29 30 29 30 31 26 27 28 29 30**

**July August September**

**Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su**

**1 2 1 2 3 4 5 6 1 2 3**

**3 4 5 6 7 8 9 7 8 9 10 11 12 13 4 5 6 7 8 9 10**

**10 11 12 13 14 15 16 14 15 16 17 18 19 20 11 12 13 14 15 16 17**

**17 18 19 20 21 22 23 21 22 23 24 25 26 27 18 19 20 21 22 23 24**

**24 25 26 27 28 29 30 28 29 30 31 25 26 27 28 29 30**

**31**

**October November December**

**Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su**

**1 1 2 3 4 5 1 2 3**

**2 3 4 5 6 7 8 6 7 8 9 10 11 12 4 5 6 7 8 9 10**

**9 10 11 12 13 14 15 13 14 15 16 17 18 19 11 12 13 14 15 16 17**

**16 17 18 19 20 21 22 20 21 22 23 24 25 26 18 19 20 21 22 23 24**

**23 24 25 26 27 28 29 27 28 29 30 25 26 27 28 29 30 31**

**30 31**

**Date and time**

import datetime

'''t=datetime.time(22,56,44)

print(t)

print("hour",t.hour)

print("minute",t.minute)

print("second",t.second)

print("microsecond",t.microsecond)'''

''''d=datetime.date.today()

print(d)

print("year",d.year)

print("month",d.month)

print("day",d.day)'''

d1=datetime.date.today()

print(d1)

td=datetime.timedelta(days=2)

print(td)

d2=d1+td

print(d2)

**output**

2021-12-20

2 days, 0:00:00

2021-12-22

**Math**

help("modules")

#import math

#print("the value of pi is",math.pi)

#import math as m

#print("the value of pi is",m.pi)

#from import math import pi,sqrt

#print("the value of pi is",pi)

#print("the square root of 4 is",sqrt(4))

import math

print(math.cos(90))

print(math.sin(80))

**output**

-0.4480736161291701

-0.9938886539233752

Time

import time

t=time.localtime()

print("time:",t)

print("current year:",t.tm\_year)

print("current month:",t.tm\_mon)

print("current time in sec:",time.time())

#print("current time:",time.ctime())

print("current time after 30 sec:",time.ctime(time.time()+30))

**output**

time: time.struct\_time(tm\_year=2021, tm\_mon=12, tm\_mday=20, tm\_hour=12, tm\_min=6, tm\_sec=15, tm\_wday=0, tm\_yday=354, tm\_isdst=0)

current year: 2021

current month: 12

current time in sec: 1639982175.1137094

current time after 30 sec: Mon Dec 20 12:06:45 2021

**statisticks modules**

import statistics

'''print(statistics.mean([1, 3, 5, 7, 9, 11, 13]))

print(statistics.mean([1, 3, 5, 7, 9, 11]))

print(statistics.mean([-11, 5.5, -3.4, 7.1, -9, 22]))'''

'''print(statistics.median([1, 3, 5, 7, 9, 11, 13]))

print(statistics.median([1, 3, 5, 7, 9, 11]))'''

**output**

7

6

1.8666666666666667

7

6.0

**Random modules**

import random

'''random.seed(10)

print(random.random())

print(random.getstate())

mylist = ["apple", "banana", "cherry"]

print(random.choice(mylist))'''

print(random.uniform(20, 60))

**output**

choice

apple

uniform

55.05945432642778