**C03**

**1. Work with built-in packages**

|  |
| --- |
| A)Date and time  Importdatetime |
|  | t=datetime.time(12,54,20,11) |
|  | print(t) |
|  | print("hour",t.hour) |
|  | print("minute",t.minute) |
|  | print("seond",t.second) |
|  | print("microsecond",t.microsecond) |
|  | print() |
|  | d=datetime.date.today() |
|  | print(d) |
|  |  |
|  | print("year",d.year) |
|  | print("month",d.month) |
|  | print("day",d.day) |
|  | print() |
|  | d1=datetime.date.today() |
|  | print(d1) |
|  | td=datetime.timedelta(days=3) |
|  | print(td) |
|  | d2=d1+td |
|  | print(d2) |
|  | print() |
|  | dt=datetime.datetime.combine(d,t) |
|  | print(dt)  **output:** |

*B) Calender*

import calendar

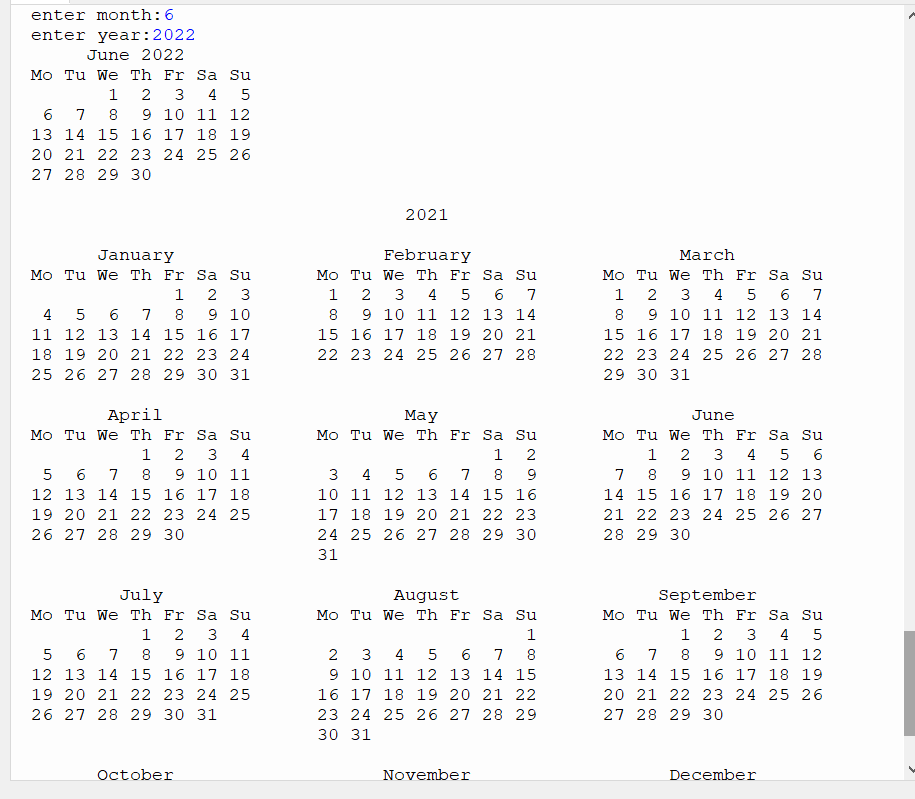
mm=int(input("enter month:"))

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

print(calendar.month(yy,mm))

print(calendar.calendar(2021))

*output:*



*c) Math*

*import math*

*print(math.pi)*

*import math as m*

*print(m.pi)*

*from math import pi,sqrt*

*print(math.pi,math.sqrt(4))*

*from math import pi,sqrt*

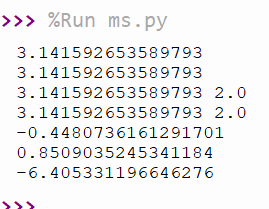
*print(pi,sqrt(4))*

*print(math.cos(90))*

*print(math.sin(45))*

*print(math.tan(30))*

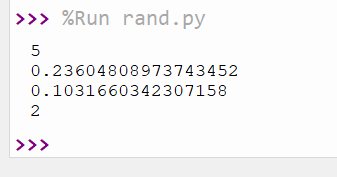
*output:*

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**D)Random**

|  |
| --- |
| importrandom |
|  | l1 = [1, 2, 3, 4, 5, 6] |
|  | print(random.choice(l1)) |
|  | random.seed(4) |
|  | print(random.random()) |
|  | print(random.random()) |
|  | r1=random.randint(1,2) |
|  | print(r1) |

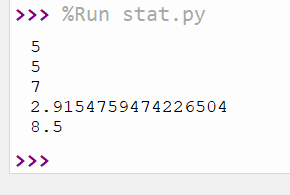
**Output**

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**E)Statistic**

|  |
| --- |
| import statistics |
|  | l1=[4,7,8,2,3,4,5,7,8,9,0,7,1] |
|  | a=statistics.mean(l1) |
|  | print(a) |
|  | b=statistics.median(l1) |
|  | print(b) |
|  | c=statistics.mode(l1) |
|  | print(c) |
|  | d=statistics.stdev(l1) |
|  | print(d) |
|  | e=statistics.variance(l1) |
|  | print(e) |

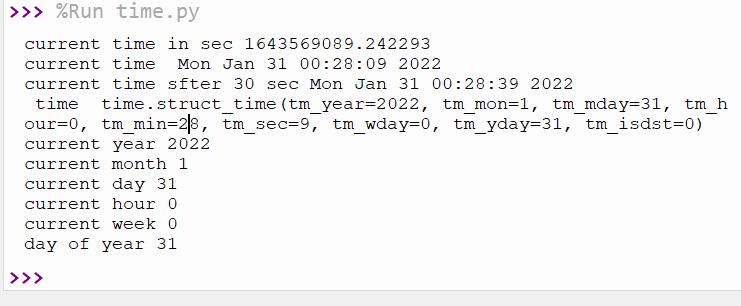
**Output:**

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**F)Time**

|  |
| --- |
| import time |
|  | print("current time in sec",time.time()) |
|  | print("current time ",time.ctime()) |
|  | print("current time sfter 30 sec",time.ctime(time.time()+30)) |
|  | t=time.localtime() |
|  | print(" time ",t) |
|  | print("current year",t.tm\_year) |
|  | print("current month",t.tm\_mon) |
|  | print("current day",t.tm\_mday) |
|  | print("current hour",t.tm\_hour) |
|  | print("current week",t.tm\_wday) |
|  | print("day of year",t.tm\_yday) |

Output

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**2. Create a package graphics with modules rectangle, circle and sub-package 3D-graphics with modules cuboid and sphere. Include methods to find area and perimeter of respective figures in each module. Write programs that finds area and perimeter of figures by different importing statements. (Include selective import of modules and import \* statements)**

**Graphicuse.py**

**Package:graphics**

**from graphics import rectangle**

**from graphics import circle**

**l=int(input("enter length"))**

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

**rectangle.perimeter(l,b)**

**rectangle.area(l,b)**

**print()**

**r=int(input("enter radius"))**

**circle.perimeter(r)**

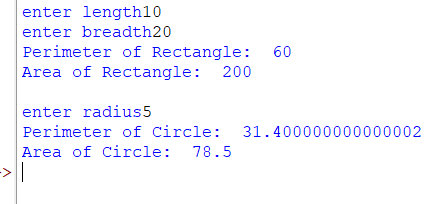
**circle.area(r)**

**Circle.py**

|  |
| --- |
| def perimeter(r): |
|  | return(2\*3.14\*r) |
|  | def area(r): |
|  | return(2\*3.14\*r\*r) |

**Rectangle.py**

|  |
| --- |
| def perimeter(l,b): |
|  | return(l+b)\*2 |
|  | def area(l,b): |
|  | return(l\*b) |

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