PRACTICAL FILE

COMPUTER SCIENCE

CLASS: XI Science

Department Of Computer Science

Rabindra Vidya Niketan, NH-49, Keonjhar, Odisha

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ROLL NO:

CERTIFICATE

Name: _____ Class: XI Science

Roll No: _____ Exam : AISSCE 2021

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This is certified to be the bonafide work of the student in the ***Computer Science Laboratory*** *during the academic year* ***2020-21****.*

No. of practical certified _____ out of _____ in the subject of ***Computer Science****.*

Teacher In-Charge

*Date:*_____

I N D E X

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Teacher's Signature

PFQ01.

Write a python program that accepts radius of circle and print its area.

PROGRAM:

```
import math
radius = float (input ("Enter the radius: "))
area = math.pi*radius*radius
print("Area of the circle is:", area,"units square")
```

OUTPUT:

```
Enter the radius: 7
Area of the circle is: 153.93804002589985 units square
```

PFQ 02.

Write a python program to calculate the Simple Interest and Compound Interest based on Principal amount, rate and time entered by the user.

PROGRAM:

```
p= float (input ("Enter principal amount "))
r = float (input ("Enter annual rate of interest "))
t = float (input ("Enter time in number of years "))
SI = p*r*t/100
CI= p* (1+r/100) **t-p
print ("Simple Interest is ", SI)
print ("Compoound Interest is ",CI)
```

OUTPUT:

```
Enter principal amount 100
Enter annual rate of interest 10
Enter time in number of years 5
Simple Interest is  50.0
Compoound Interest is  61.051000000000045
```

PFQ 03:

Write python program that inputs a students's marks in three subjects (out of 100) and print the percentage marks.

PROGRAM:

```
Math = float (input ("Enter Math Marks: "))
Physics= float (input ("Enter Physics Marks: "))
Chemistry = float(input ("Enter Chemistry Marks: "))
total = Math + Physics + Chemistry
Percentage = (total/300) *100
print ("Total Marks = ", total)
print ("Marks Percentage = ", Percentage)
```

OUTPUT:

```
Enter Math Marks: 92
Enter Physics Marks: 94
Enter Chemistry Marks: 61
Total Marks =  247.0
Marks Percentage =  82.33333333333334
```

PFQ 04:

Write a python program to compute area of square and triangle

PROGRAM:

```
def circle():
  print("You choose Circle...")
  radius=int(input("enter the radius : "))
  print("Area of the circle with the radius of ",radius," units is", 3.14*          (radius**2),"square units.")
def square():
  print("You choose Square...")
  side=int(input("enter the size of a side of a square : "))
  print("Area of the square with the a side of ",side," units is",side**2,"square units.")
print("Menu-\n"
     "1. Circle\n"
     "2. Square\n")
x=int(input("Enter the corresponding number of a shape given in the menu, whose area you wants to calculate : "))
if x==1:
  circle()
elif x==2:
  square()
else:
  print("Wrong Input!")
```

OUTPUT:

```
Menu-
1. Circle
2. Square

Enter the corresponding number of a shape given in the menu, whose area you wants to calculate : 1
You choose Circle...
enter the radius : 7
Area of the circle with the radius of  7  units is 153.86 square units.
```

PFQ 05:

Write a Python program to accept two numbers and print their quotient and remainder.

PROGRAM:

```
a=int (input ("Enter the first value: "))
b=int (input ("Enter the second value: "))
print ("Quotient is: ",a//b)
print("Remainder is: ",a%b)
```

OUTPUT:

```
Enter the first value: 6
Enter the second value: 3
Quotient is:  2
Remainder is:  0
```

PFQ 06:

Write a Python program to accepts three integers and print the largest of the three.

PROGRAM:

```
a1=int (input ("Enter 1st number: "))
a2=int (input ("Enter 2nd number: "))
a3=int (input ("Enter 3rd number: "))
if (a1 > a2) and (a1 > a3):
    largest = a1
if (a2>a1) and (a2> a3):
    largest = a2
else:
    largest = a3
print ("The largest number = ", largest)
```

OUTPUT:

```
Enter 1st number: 22
Enter 2nd number: 21
Enter 3rd number: 27
The largest number =  27
```

PFQ 07:

Write a Python program to accept a number and check the number is prime or not.

PROGRAM:

```
# Program to check if a number is prime or not
num = int(input("Enter a number: "))
if num > 1:
  for i in range(2,num):
    if (num % i) == 0:
      print(num,"is not a prime number")
      break
  else:
    print(num,"is a prime number")
else:
  print(num,"is not a prime number")
```

OUTPUT:

```
Enter a number: 69
69 is not a prime number
```

PFQ 08:

Write a Python program to reads two numbers and an operator and displays the computed result.

PROGRAM:

```
a=float(input('Enter the first number:'))
b=float(input('Enter the second number:'))
c=input('Enter the operator[/,*,+,-]:')
if c=='/':
   r=a/b
elif c=='*':
   r=a*b
elif c=='+':
   r=a+b
elif c=='-':
   r=a-b
else:
    print('Invalid operator')
print(a,c,b,'=',r)
```

OUTPUT:

```
Enter the first number:2004
Enter the second number:4
Enter the operator[/,*,+,-]:/
2004.0 / 4.0 = 501.0
```

PFQ09:

Write a Python program to calculate the factorial of a number

PROGRAM:

```
num=int(input('Enter a number:'))
fact=1
a=1
while a<=num:
    fact*=a
    a+=1
print('The factorial of',num,'is',fact)
```

OUTPUT:

```
Enter a number:10
The factorial of 10 is 3628800
```

PFQ10.

Write a program to input a number and check if it is a prime number. (use for loop)

PROGRAM:

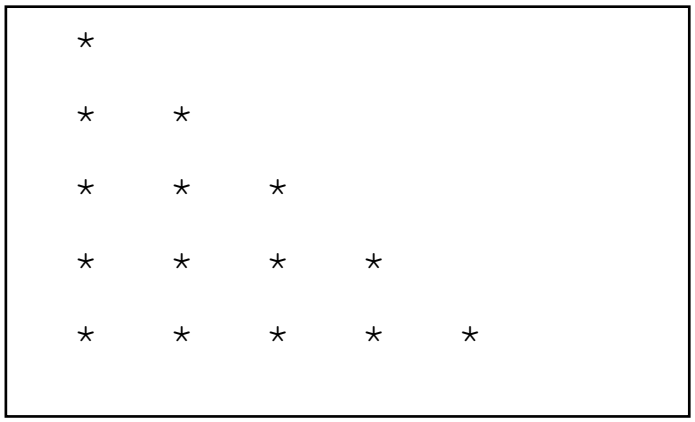
```
num=int(input('Enter a number:'))
if num > 1:
   for i in range(2, int(num/2)+1):
      if (num % i) == 0:
         print(num, "is not a prime number")
         break
   else:
      print(num, "is a prime number")
else:
   print(num, "is not a prime number")
```

OUTPUT:

```
Enter a number:7
7 is a prime number
```

PFQ11:

Write a program to print the pattern. (using nested for loop)



PROGRAM:

```
for i in range(0, 5):
    for j in range(0, i + 1):
        print("* ", end="")
    print()
```

OUTPUT:

```
*
* *
* * *
* * * *
* * * * *
```

PFQ12.

Write a program to print Fibonacci Series for first 20 elements. (use for loop)

```
0 1 1 2 3 5 8 …
```

PROGRAM:

```
nterms =20
n1, n2 = 0, 1
count = 0
if nterms <= 0:
  print("Please enter a positive integer")
elif nterms == 1:
  print("Fibonacci sequence upto",nterms,":")
  print(n1)
else:
  print("Fibonacci sequence:")
  while count < nterms:
    print(n1)
    nth = n1 + n2S
    n1 = n2
    n2 = nth
    count += 1
```

OUTPUT:

```
Fibonacci sequence:
0
1
1
2
3
5
8
13
21
34
55
89
144
233
377
610
987
1597
2584
4181
```