**PROBLEM SOLVING AND PYTHON PROGRAMMING**

**RECORD**

**PYTHON PROGRAM USING DECISION-MAKING**

**STATEMENTS AND EXPRESSIONS**

**EXERCISE NO :** 3(a)  **LEAP YEAR OR NOT**

**DATE :** 30-12-2022

**PROGRAM :**

n=int(input("Enter the Year:"))

if(n%4==0 and n%100!=0)or(n%400==0):

print(n,"is a Leap Year")

else:

print(n,"is Not a Leap Year")

**OUTPUT :**

1. Enter the Year: 2028
2. is a Leap Year
3. Enter the Year:1900

1900 is Not a Leap Year

**EXERCISE NO :** 3(b) **READ A CHARACTER. IF IT IS UPPERCASE PRINT ‘U’**

**DATE :** 30-12-2022

**PROGRAM :**

1. ch=input("Enter a character:")

if ch.isupper():

print("U")

1. ch=input("Enter a character:")

if(ch>='A' and ch<='Z'):

print("U")

**OUTPUT :** (same for both programs)

1. Enter a character: i

**>>>**

1. Enter a character: H

U

**EXERCISE NO :** 3(c) **TOTAL SALARY WITH BONUS CALCULATION AND PRINT SALARY, BONUS AND TOTAL AMOUNT.**

**GENDER BONUS : M-10% ; F-12%**

**DATE :** 30-12-2022

**PROGRAM :**

gen=input("Enter the gender of the employee(F or M):")

sal=int(input("Enter the salary(in Rs):"))

total=0

if(gen=='F'):

bonus=0.12\*sal

else:

bonus=0.1\*sal

total=sal+bonus

print("Salary without bonus(in Rs):",sal)

print("Bonus amount(in Rs):",bonus)

print("Total salary(in Rs):",total)

**OUTPUT :**

1. Enter the gender of the employee(F or M): F

Enter the salary (in Rs): 35000

Salary without bonus (in Rs): 35000

Bonus amount (in Rs): 4200.0

Total salary (in Rs): 39200.0

1. Enter the gender of the employee(F or M): M

Enter the salary (in Rs): 50000

Salary without bonus (in Rs): 50000

Bonus amount (in Rs): 5000.0

Total salary (in Rs): 55000.0

**EXERCISE NO :** 3(d) **BIGGEST OF THREE NUMBERS**

**DATE :** 30-12-2022

**PROGRAM :**

a=int(input("Enter number 1:"))

b=int(input("Enter number 2:"))

c=int(input("Enter number 3:"))

if(a>b and a>c):

print(a,"is the biggest number")

elif(b>a and b>c):

print(b,"is the biggest number")

else:

print(c,"is the biggest number")

**OUTPUT :**

1. Enter number 1: 89

Enter number 2: 54

Enter number 3: 836

1. is the biggest number
2. Enter number 1:32

Enter number 2:549

Enter number 3:124

549 is the biggest number

**EXERCISE NO :** 3(e) **ODD (OR) EVEN**

**DATE:** 30-12-2022

**PROGRAM :**

n=int(input("Enter a number:"))

if(n%2==0):

print("The given number is EVEN")

else:

print("The given number is ODD")

**OUTPUT :**

1. Enter a number:135

The given number is ODD

1. Enter a number:232

The given number is EVEN

**EXERCISE NO :** 3(f) **STUDENT GRADE ANALYSIS**

**DATE :** 30-12-2022

|  |  |
| --- | --- |
| **MARKS** | **GRADE** |
| 90 ABOVE | O |
| 80 TO 90 | A+ |
| 70 TO 80 | A |
| 60 TO 70 | B+ |
| 50 TO 60 | B |
| <50 | U |

**PROGRAM :**

name=input("Enter the Name of the student:")

roll\_no=input("Enter the Roll no:")

m1=int(input("Enter the marks of subject 1:"))

m2=int(input("Enter the marks of subject 2:"))

m3=int(input("Enter the marks of subject 3:"))

avg=(m1+m2+m3)/3

print("Name:",name,"\nRoll no:",roll\_no,"\nAverage:",avg)

if avg<=100 and avg>90:

print("Grade: O")

elif avg<=90 and avg>80:

print("Grade: A+")

elif avg<=80 and avg>70:

print("Grade: A")

elif avg<=70 and avg>60:

print("Grade: B+")

elif avg<=60 and avg>=50:

print("Grade: B")

else:

print("Grade: U")

**OUTPUT :**

Enter the Name of the student:Yogitha

Enter the Roll no:22CSEB33

Enter the marks of subject 1:99

Enter the marks of subject 2:100

Enter the marks of subject 3:98

Name: Yogitha

Roll no: 22CSEB33

Average: 99.0

Grade: O