KIET Group of Institutions, Ghaziabad

Department of Computer Applications

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Problem Solving Using C Lab

KCA 151: Session 2020-21

Experiment – No-1

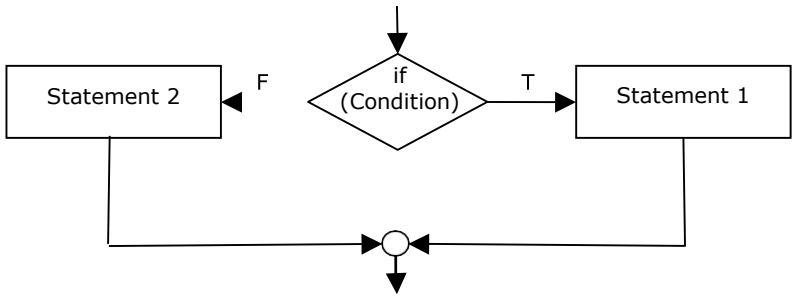
Objective: Program to implement condition statement in C language		
Scheduled Date	**Compiled Date**	**Submission Date**
20-Dec-2020	**20-Dec-2020**	**21-Dec-2020**

Program : A program to check weather given number is even or odd

Algorithm

Step 1: Start
Step 2: [Take Input] Read: Number
Step 3: Check: If Number%2 == 0 Then
Print : N is an Even Number.
Else
Print : N is an Odd Number.
Step 4: Exit

Flowchart Segment:



Program

```
main()
{
        int num;
        printf(" Enter a number : ");
        scanf("%d",&num);
        if (num % 2  == 0)
                printf(" Even Number ");
        else
                printf(" Odd Number ");
}
```

Output Screen

```
enter a number44
44 number is even
```

PROGRAM: <u>A Program to check Leap Year .</u>

Algorithm

1.Start.

2.{Take Input} read number.

3.Check number is leap year or not

Condition :

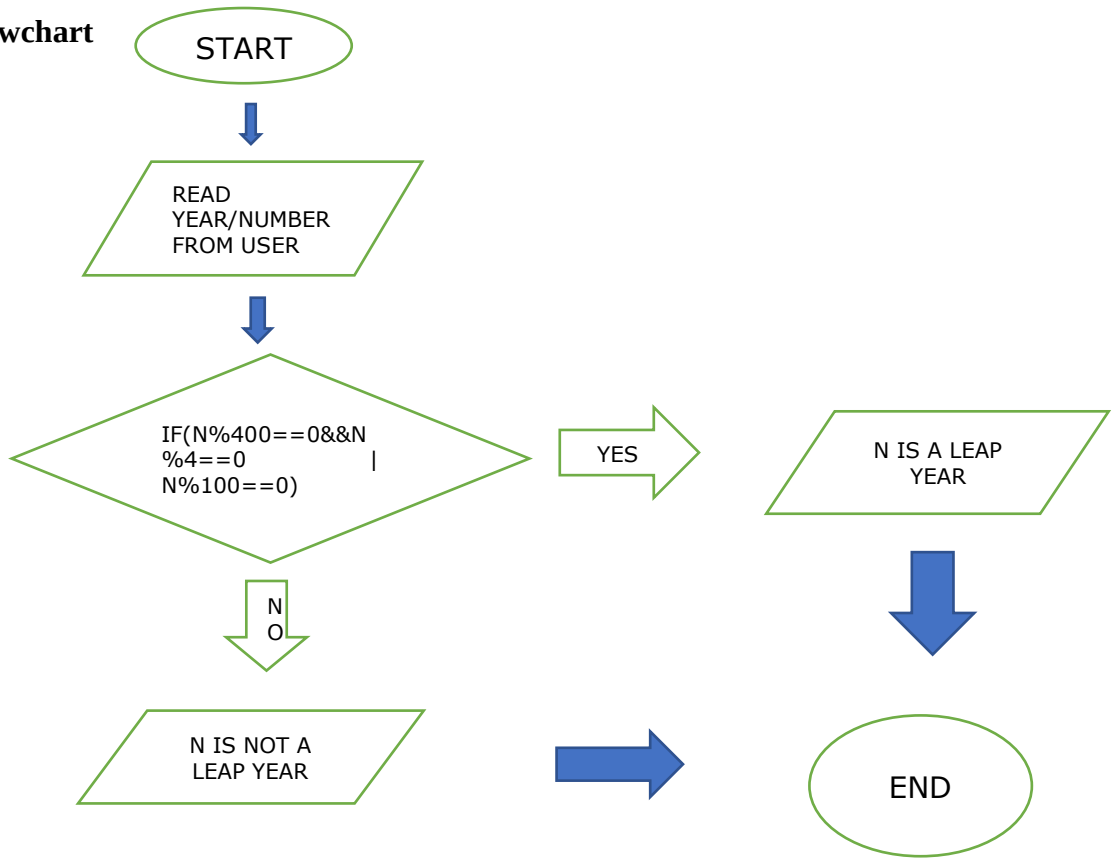
If (n%400==0 && n%4==0 | n%100==0)

4. If condition verified ,Print n is a leap year

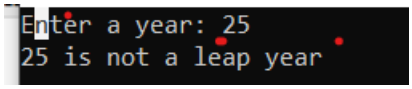
Otherwise , n is not a leap year .

5.End .

Flowchart



```
#include<stdio.h>
#include<conio.h>
int main() {
   int year;
   printf("Enter a year: ");
   scanf("%d", &year);
   if((year%400==0) && ((year%4==0) | (year%100!=0)) )
   {
      printf("%d is a leap year", year);
   }
                  else {
      printf("%d is not a leap year", year);
   }
   return 0;
}
```

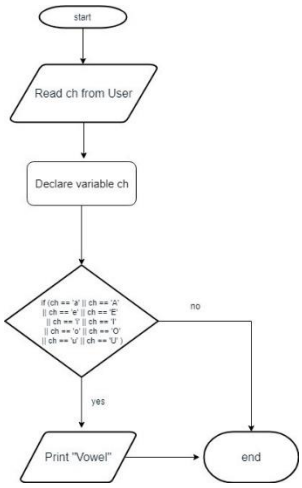


Program: A program to given character is vowel or not

Algorithm

1. We first declare a variable ch of character datatype.
2. Then we read one character from the user and store it in a variable "ch"
3. Then we compare "ch" with the vowels in both upper and lower case. If it matches we print "vowel" else we print "Consonant"

Flowchart



Program

```
#include <stdio.h>

int main() {

char a;
printf("Enter the character to check: ");
scanf("%c",&a);
switch(a){
case 'A':
case 'E':
case 'I':
case 'O':
case 'U':
case 'a':
case 'e':
case 'i':
case 'o':
case 'u':{
printf("it is a vowel:");
break;
}
default:
{ printf("This is consonant");
break;
}
}
return 0;
}
```

Output

```
Enter the character to check: A
it is a vowel:
```

PROGRAM: PROGRAM TO FIND INSURANCE PRICE .

ALGORITHM :

1.START.

2. INITIALIZE VARIABLES GENDER ,AGE , SMOKE_STATUS,INSURANCE.

3.READ THE VALUE OF GENDER , AGE , SMOKE_STATUS

4. APPLY CONDITION ACCORDING TO THE POLICY;-

IF(20<AGE<30) , INSURANCE=10000. ELSE

IF(30<AGE<40) , INSURANCE=15000.ELSE

IF(40<AGE<50) , INSURANCE=20000.ELSE

IF(50<AGE<60) , INSURANCE=25000.ELSE

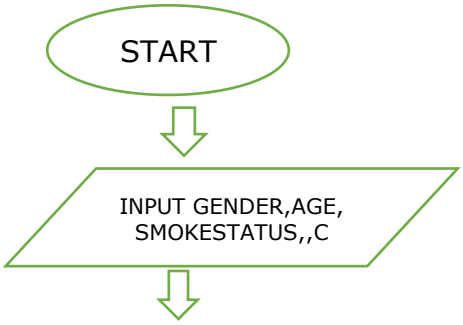
NO INSURANCE.

5. IF(GENDER = F OR f) ,DISCOUNT OF 10% ON INSURANCE .

6. IF INSURER IS SMOKER ,PENALTY OF 10% ON INSURANCE.

7. END

FLOWCHART



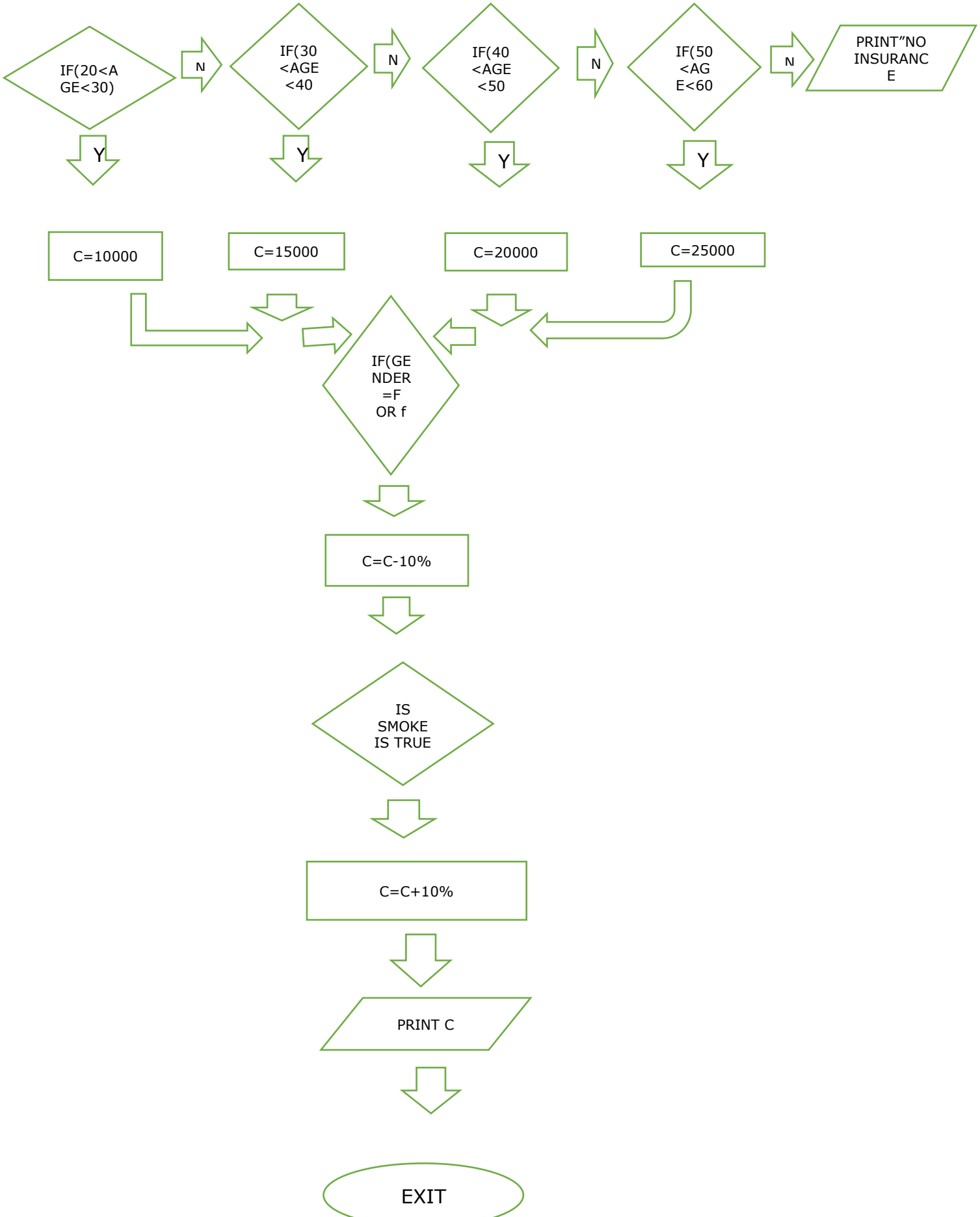
KIET Group of Institutions, Ghaziabad

Department of Computer Applications

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Problem Solving Using C Lab

KCA 151: Session 2020-21

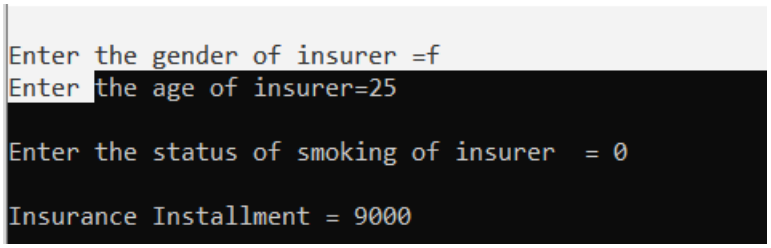


PROGRAM

```
#include<stdio.h>
#include<conio.h>
 int main()
  {

   int age,smoking_status,c;
   char gender;

     printf("\nEnter the gender of insurer =" );
   scanf("%c",&gender);
   printf("Enter the age of insurer=");
   scanf("%d",&age);

   printf("\nEnter the status of smoking of insurer  = ");
   scanf("%d",&smoking_status);
   if(age>=20 && age<=30)
    {
     c=10000;
    }
   else
    if(age>=31&&age<=40)
     {
      c=15000;
     }
     else
      if(age>=41&&age>=50)
       {
           c=20000;
       }
       else
            if(age>=51&&age>=60)
             {
              c=25000;
             }
             else
              if(age<20&&age>60)
               {
                printf("no insurance ");
               }
   if(gender=='f' || gender=='F')
```

```
  {
   c=c-(c*10/100);
  }
 if(smoking_status==1)
  {
   c=c+(c*10/100);
  }
 printf("\nInsurance Installment = %d ",c);
return 0;
}
```

OUTPUT



YASH AGRAWAL
MCA 1 B