TW: 9

Design, develop, code and run the program in any suitable language to implement the Next Date function. Analyze it from the perspective of equivalence class value testing, derive different test cases, execute these test cases and discuss the test results.

ALGORITHM

STEP 1: Input date in format DD.MM.YYYY

STEP2: if MM is 01, 03, 05,07,08,10 do STEP3 else STEP6

STEP3:if DD < 31 then do STEP4 else if DD=31 do STEP5 else

output(Invalid Date);

STEP4: tomorrowday=DD+1 goto STEP18

STEP5: tomorrowday=1; tomorrowmonth=month + 1 goto STEP18

STEP6: if MM is 04, 06, 09, 11 do STEP7

STEP7: if DD<30 then do STEP4 else if DD=30 do STEP5 else

output(Invalid Date);

STEP8: if MM is 12

STEP9: if DD<31 then STEP4 else STEP10

STEP10: tomorrowday=1, tommorowmonth=1, tommorowyear=YYYY+1;

goto STEP18

STEP11: if MM is 2

STEP12: if DD<28 do STEP4 else do STEP13

STEP13: if DD=28 & YYYY is a leap do STEP14 else STEP15

STEP14: tommorowday=29 goto STEP18

STEP15: tommorowday=1, tomorrowmonth=3, goto STEP18;

STEP16: if DD=29 then do STEP15 else STEP17

STEP17: output(“Cannot have feb”, DD); STEP19

STEP18: output(tomorrowday, tomorrowmonth, tomorrowyear);

STEP19: exit

#include<stdio.h>

#include<conio.h>

main( )

{

int month[12]={31,28,31,30,31,30,31,31,30,31,30,31};

int d,m,y,nd,nm,ny,ndays;

clrscr( );

printf("enter the date,month,year");

scanf("%d%d%d",&d,&m,&y);

ndays=month[m-1];

if(y<=1812 && y>2012)

{

printf("Invalid Input Year");

exit(0);

}

if(d<=0 || d>ndays)

{

printf("Invalid Input Day");

exit(0);

}

if(m<1 && m>12)

{

printf("Invalid Input Month");

exit(0);

}

if(m==2)

{

if(y%100==0)

{

if(y%400==0)

ndays=29;

}

else if(y%4==0)

ndays=29;

}

nd=d+1;

nm=m;

ny=y;

if(nd>ndays)

{

nd=1;

nm++;

}

if(nm>12)

{

nm=1;

ny++;

}

printf("\n Given date is %d:%d:%d",d,m,y);

printf("\n Next day’s date is %d:%d:%d",nd,nm,ny);

getch( );

}

**Test case 1:**

Enter the today’s date in the form of dd/mm/yyyy

28/02/1992

Next day is : 29/02/1992

**Test case 2:**

Enter the today’s date in the form of dd/mm/yyyy

31/04/2013

Value of day , not in the range day <=30