1  **PROGRAM FOR CALCULATION OF SIMPLE INTEREST**

/\* Principal amount(p),No.of years (n) & Rate of interest (r) are the inputs throuth the keyboard. Program to calculate Simple interest (si) using the formula si = p \* n \* r / 100 \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int n;

long int p;

float r;

double si;

printf("Enter Prinical amount = ");

scanf("%ld",&p);

printf("Enter No. of Years = ");

scanf("%d",&n);

printf("Enter Rate of interest = ");

scanf("%f",&r);

si=p\*n\*r/100;

printf("Simple interest = %lf ",si);

getch();

}

2 **PROGRAM FOR CALCULATION OF BASIC SALARY**

/\*Basic salary of an employ is input throught keyboard. His dearness allowance is 40% and house rent is 20% of basic salary. Program to calculate basic salary \*/

#include<stdio.h>

#include<conio.h>

#include<math.h>

void main()

{

clrscr();

long int bassal;

double da,hra,grsal;

printf("Enter Basic salary of an employee ");

scanf("%ld",&bassal);

da=bassal\*40/100;

hra=bassal\*20/100;

grsal=bassal+da+hra;

printf("\n Gross salary of an Employee is %lf",grsal);

getch();

}

3 **PROGRAM FOR CONVERSIONS**

/\*The distance between two cities in km is input through keyboard. Program to convert and print distance in meters,centimenter;inches;feet use one feet=12 inch,2.54 inch=1 cm,100 cm=1 m,100 m=1 km \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

double feet,inch,m,cm,km;

printf("\n");

printf("Enter distance in KM.");

scanf("%lf",&km);

m=100\*km;

cm=100\*m;

inch=cm/2.54;

feet=inch/12;

printf("\nDistance in meter = %lf ",m);

printf("\nDistance in centimeter = %lf ",cm);

printf("\nDistance in inch = %lf ",inch);

printf("\nDistance in feet + %lf ",feet);

getch();

}

4 **PROGRAM FOR CALUCULATION OF MARKS & PERSENTAGE**

/\*The marks obtained by five students in five different subjects are input through the keyboard. Program to find out aggregate marks and percentage marks obtained by the student. Assume the maximum marks obtained ba student in each subject is 100 \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

float m1,m2,m3,m4,m5,aggm,percm;

printf("Enter marks of five subject ");

scanf("%f%f%f%f%f",&m1,&m2,&m3,&m4,&m5);

aggm=m1+m2+m3+m4+m5;

percm=aggm\*100/500;

printf("\n Aggreage marks obtained by a student = %f ",aggm);

printf("\n Percentage marks obtained by a student = %f ",percm);

getch();

}

5 **PROGRAM FOR INTERCHANGE THE CONTENTS**

/\*Two numbers are input throught the keyboard into two locations C,D. Program to interchange the conents of C & D \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int c,d,tmp;

printf("\n");

printf("Enter the contents of C & D ");

scanf("%d%d",&c,&d);

tmp=c;

c=d;

d=tmp;

printf("\nInterchanged contents of C & D are %d\t%d ",c,d);

getch();

}

6 **PROGRAM TO CALCULATE SUM OF DIGITS FOR FIVE DIGIT NUMBER USING MOD % OPERATOR**

/\*Any five digit number is input throught the keyboard. Program to calculate

sum of its digits The divisional operator / returns the quotient & modulus

operator % returns the remainder on dividing one number by another

12345/10000 returns 1

12345/%10000 returns 2345 \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

long int num,tmp,tmp1,sum=0;

printf("\n");

printf("Enter any five digit number");

scanf("%ld",&num);

tmp=num/10000;

tmp1=num%10000;

sum=sum+tmp;

num=tmp1;

tmp=num/1000;

tmp1=num%1000;

sum=sum+tmp;

num=tmp1;

tmp=num/100;

tmp1=num%100;

sum=sum+tmp;

num=tmp1;

tmp=num/10;

tmp1=num%10;

sum=sum+tmp+tmp1;

printf("Sum of all digits = %d ",sum);

getch();

}

7 **PROGRAM TO PRINT REVERSE NO - USING MOD % OPERATOR**

/\*Any five digit number is input thorugh keyboard. Program to reverse the number \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

long int num,tmp,tmp1,sum=0;

printf("Enter any five digit number ");

scanf("%ld",&num);

tmp=num/10000;

tmp1=num%10000;

sum=sum+tmp;

num=tmp1;

tmp=num/1000;

tmp1=num%1000;

sum=sum+tmp\*10;

num=tmp1;

tmp=num/100;

tmp1=num%100;

sum=sum+tmp\*100;

num=tmp1;

tmp=num/10;

tmp1=num%10;

sum=sum+tmp\*1000+tmp1\*10000;

printf("Reverse number = %ld",sum);

getch();

}

8 **PROGRAM TO CALUCULATE SUM OF 1ST & LAST DIGIT OF NUMBER – USING MOD OPERATOR**

/\*Any five digit number is input through the keyboard. Program to calculate

sum of first & last digit digit \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

long int num ,tmp,tmp1;

int sum=0;

printf("Enter any five digit number");

scanf("%ld",&num);

tmp=num/10000;

sum=sum+tmp;

tmp1=num%10;

sum=sum+tmp1;

printf("Sum of first & last digit= %d",sum);

getch();

}

9 **PROGRAM TO CALCULATE TOTAL EXPANCES – USING SIMPLE if STATEMENTS 1 ST METHOD**

**/\* PROGRAM USING SIMPLE if - ONLY ONE STATEMENT IN if**

While purchasing certain items , a discount of 10% is offered if the quantity is more than 1000. If quantity & rate per item are input through the keyboard. Program to calculate total expances \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

long int qty,dis=0;

double rate,total;

printf("Enter quanty & Rate per item ");

scanf("%ld%lf",&qty,&rate);

if(qty>1000)

dis=10;

total=(qty\*rate)-(qty\*rate\*dis/100);

printf("Total Expances = %lf",total);

getch();

}

**10 PROGRAM TO CALCULATE TOTAL EXPANCES – USING NOT ! OPERATOR – 2ND METHOD**

/\* PROGRAM USING SIMPLE if - ONLY ONE STATEMENT IN if

While purchasing certain items , a discount of 10% is offered if the

quantity is more than 1000. If quantity & rate per item are input through

the keyboard. Program to calculate total expances \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

long int qty,dis=0;

double rate,total;

printf("Enter quanty & Rate per item ");

scanf("%ld%lf",&qty,&rate);

if(qty>1000)

dis=10;

total=(qty\*rate)-(qty\*rate\*dis/100);

printf("Total Expances = %lf",total);

getch();

}

11 **PROGRAM USING MULTIPLE STATEMENTS WITHIN if - 1st METHOD**

/\* PROGRAM FOR MULTIPLE STATEMENTS WITH IN if

The current year & the year in which the employee is joined the organization are entered through the keyboard. if the number of years for which the employee has served is greater than 3 then a bonus of Rs 2500/- is given to the employee. if the years of service is not greater than 3 then the

program should not do anything \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int bonus,cur\_yr,yr\_of\_jon,yr\_of\_ser;

printf("Enter Current year & Year of joining ");

scanf("%d%d",&cur\_yr,&yr\_of\_jon);

yr\_of\_ser = cur\_yr - yr\_of\_jon;

if (yr\_of\_ser > 3)

{

bonus=2500;

printf("Bonus = Rs %d",bonus);

}

getch();

}

12 **PROGRAM USING NOT ! OPERATOR % MULTIPLE STATEMENTS WITHIN if - 2 nd METHOD**

/\* PROGRAM USING NOT ! OPERATOR & MULTIPLE STATEMENTS WITH IN if

The current year & the year in which the employee is joined the organization are entered through the keyboard. if the number of years for which the employee has served is greater than 3 then a bonus of Rs 2500/- is given to the employee. if the years of service is not greater than 3 then the

program should not do anything \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int bonus,cur\_yr,yr\_of\_jon,yr\_of\_ser;

printf("Enter Current year & Year of joining ");

scanf("%d%d",&cur\_yr,&yr\_of\_jon);

yr\_of\_ser = cur\_yr - yr\_of\_jon;

if (!(yr\_of\_ser <= 3))

{

bonus=2500;

printf("Bonus = Rs %d",bonus);

}

getch();

}

13 **PROGRAM USING MULTIPLE STATEMENTS WITHIN if – 1st METHOD**

/\* 1 st method - PROGRAM USING MULTIPLE STATEMENTS WITHIN if

In a company an employee is paid as under. If his basic salary is less than 1500, then hra=10% & da=90% of basic salary. If his basic salary is either equal to or above Rs 1500, then hra = Rs 500 & da = 90% of basic salary. If employee's salary is input through the keyboard. program to

calculate gross salary \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

double bassal,hra,da,grsal;

printf("Enter basic salary of Employee ");

scanf("%lf",&bassal);

if (bassal<1500)

{

da=bassal\*10/100;

hra=bassal\*90/100;

}

if (bassal>=1500)

{

da=500;

hra=bassal\*90/100;

}

grsal=bassal+da+hra;

printf("Gross Salary = Rs %lf",grsal);

getch();

}

14 **PROGRAM USING if – else statements 2nd METHOD**

/\* 2 nd method - PROGRAM USING if - else and MULTIPLE STATEMENTS WITHIN if & also within else

In a company an employee is paid as under. If his basic salary is less than 1500, then hra=10% & da=90% of basic salary. If his basic salary is either equal to or above Rs 1500, then hra = Rs 500 & da = 90% of basic salary. If employee's salary is input through the keyboard. program to

calculate gross salary \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

double bassal,hra,da,grsal;

printf("Enter basic salary of Employee ");

scanf("%lf",&bassal);

if (bassal<1500)

{

da=bassal\*10/100;

hra=bassal\*90/100;

}

else

{

da=500;

hra=bassal\*90/100;

}

grsal=bassal+da+hra;

printf("Gross Salary = Rs %lf",grsal);

getch();

}

15 **PROGRAM USING MULTIPLE STATEMENTS WITHIN if - 1 st METHOD**

/\* 1 nd method - PROGRAM USING MULTIPLE STATEMENTS WITHIN if & RELATIONAL

OPERATOR ==

In a company an employee is paid as under. If his basic salary is less than 1500, then hra=10% & da=90% of basic salary. If his basic salary is equal to 1500 then hra=400 & da = 90% of basic salary. If basic salary is above Rs 1500, then hra = Rs 500 & da = 90% of basic salary. If employee's salary is input through the keyboard. program to calculate gross salary \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

double bassal,hra,da,grsal;

printf("Enter basic salary of Employee ");

scanf("%lf",&bassal);

if (bassal<1500)

{

da=bassal\*10/100;

hra=bassal\*90/100;

}

if (bassal==1500)

{

da=400;

hra=bassal\*90/100;

}

if (bassal>1500)

{

da=500;

hra=bassal\*90/100;

}

grsal=bassal+da+hra;

printf("Gross Salary = Rs %lf",grsal);

getch();

}

16 **PROGRAM USING NESTED if-else statements - 2nd METHOD**

/\* 2 nd method - PROGRAM USING NESTED if - else & RELATIONAL

OPERATOR ==

In a company an employee is paid as under. If his basic salary is less than 1500, then hra=10% & da=90% of basic salary. If his basic salary is equal to 1500 then hra=400 & da = 90% of basic salary. If basic salary is above Rs 1500, then hra = Rs 500 & da = 90% of basic salary. If employee's salary is input through the keyboard. program to calculate gross salary \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

double bassal,hra,da,grsal;

printf("Enter basic salary of Employee ");

scanf("%lf",&bassal);

if (bassal<1500)

{

da=bassal\*10/100;

hra=bassal\*90/100;

}

else

{

if (bassal==1500)

{

da=400;

hra=bassal\*90/100;

}

else

{

da=500;

hra=bassal\*90/100;

}

}

grsal=bassal+da+hra;

printf("Gross Salary = Rs %lf",grsal);

getch();

}

17 **PROGRAM USING NESTED if-else statements – 2nd method procedure same difference in thinking**

/\* 2 nd method - PROGRAM USING NESTED if - else & RELATIONAL

OPERATOR ==

In a company an employee is paid as under. If his basic salary is less

than 1500, then hra=10% & da=90% of basic salary. If his basic salary is

equal to 1500 then hra=400 & da = 90% of basic salary. If basic salary is

above Rs 1500, then hra = Rs 500 & da = 90% of basic

salary. If employee's salary is input through the keyboard. program to

calculate gross salary \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

double bassal,hra,da,grsal;

printf("Enter basic salary of Employee ");

scanf("%lf",&bassal);

if (bassal>1500)

{

da=500;

hra=bassal\*90/100;

}

else

{

if (bassal==1500)

{

da=400;

hra=bassal\*90/100;

}

else

{

da=bassal\*10/100;

hra=bassal\*90/100;

}

}

grsal=bassal+da+hra;

printf("Gross Salary = Rs %lf",grsal);

getch();

}

18 **PROGRAM USING if – else statement 1 st METHOD**

/\*PROGRAM USING if - else statement 1 st method

The marks obtained by a student in 5 different are input through the keyboard. The student gets division as per following rules Percentage above or equal to 60 --- First division

Percentage between 50 and 59 --- Secod division

Percentage between 40 and 49 --- Thrid division

Percentage less than 40 --- Fail

Assume that the maximum marks that can be obtained by a student in each subject is 100 \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int m1,m2,m3,m4,m5,per;

printf("Enter marks of student in five subjects ");

scanf("%d%d%d%d%d",&m1,&m2,&m3,&m4,&m5);

per=(m1+m2+m3+m4+m5)/5;

if(per<40)

printf("Fail");

else

{

if(per<50)

printf("Thrid division");

else

{

if (per<60)

printf("Second division");

else

printf("First division");

}

}

getch();

}

19 **PROGRAM USING if – else & relational operator >= 2nd METHOD**

/\*PROGRAM USING if - else statement & releational operators 2 nd method

The marks obtained by a student in 5 different are input through the keyboard. The student gets division as per following rules

Percentage above or equal to 60 --- First division

Percentage between 50 and 59 --- Secod division

Percentage between 40 and 49 --- Thrid division

Percentage less than 40 --- Fail

Assume that the maximum marks that can be obtained by a student in each subject is 100 \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int m1,m2,m3,m4,m5,per;

printf("Enter marks of student in five subjects ");

scanf("%d%d%d%d%d",&m1,&m2,&m3,&m4,&m5);

per=(m1+m2+m3+m4+m5)/5;

if(per>=60)

printf("First division");

else

{

if(per>=50)

printf("Second division");

else

{

if (per>=40)

printf("Third division");

else

printf("Fail");

}

}

getch();

}

20 **PROGRAM USING LOGICAL OPERATOR AND && 3 rd METHOD**

/\*PROGRAM USING LOGICAL OPERATORS && 3 rd method

The marks obtained by a student in 5 different are input through the keyboard. The student gets division as per following rules

Percentage above or equal to 60 --- First division

Percentage between 50 and 59 --- Secod division

Percentage between 40 and 49 --- Thrid division

Percentage less than 40 --- Fail

Assume that the maximum marks that can be obtained by a student in each subject is 100 \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int m1,m2,m3,m4,m5,per;

printf("Enter marks of student in five subjects ");

scanf("%d%d%d%d%d",&m1,&m2,&m3,&m4,&m5);

per=(m1+m2+m3+m4+m5)/5;

if(per>=60)

printf("First division");

if((per>=50) && (per<60))

printf("Second division");

if((per>=40) && (per<50))

printf("Third division");

if(per<40)

printf("Fail");

getch();

}

21 **PROGRAM USING LOGICAL OPERATORS LOGICAL AND && , LOGICAL OR ||**

/\*PROGRAM USING LOGICAL OPERATORS && ,|| LOGICAL AND , LOGICAL OR

The marks obtained by a student in 5 different are input through the keyboard. The student

gets division as per following rules

Percentage above or equal to 60 --- First division

Percentage between 50 and 59 --- Secod division

Percentage between 40 and 49 --- Thrid division

Percentage less than 40 --- Fail

Assume that the maximum marks that can be obtained by a student in each

subject is 100

Assume that any one or more marks obtained by a student is less than 40

then student gets a division Fail \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int m1,m2,m3,m4,m5,per;

printf("Enter marks of student in five subjects ");

scanf("%d%d%d%d%d",&m1,&m2,&m3,&m4,&m5);

if((m1<40)||(m2<40)||(m3<40)||(m4<40)||(m5<40))

printf("Fail");

else

{

per=(m1+m2+m3+m4+m5)/5;

if(per>=60)

printf("First division");

if((per>=50) && (per<60))

printf("Second division");

if((per>=40) && (per<50))

printf("Third division");

}

getch();

}

22 **PROGRAM USING if – else & relational operators 1 st method**

**/\* PROGRAM USING if - else & relational operator == 1 st method**

A company insures the drivers in the following cases

if the driver is married & age is equal or 25

if the driver is unmarried , male & above or equal to 30 years of age

if the dirver is unmarried , female & above 25 years of age

Assume that marital status for married is M & for unmarried U

Assume sex for male is M for female is F

In all other cases the driver is not insured . If marital status , sex and age are the inputs through key board. Program to determine whether the driver is to be insured or not \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

char marst,sex;

int age;

printf("Enter Age , Sex & Marital status");

scanf("%d%c%c",&age,&sex,&marst);

if((marst=='M') && (age<25))

printf("Driver is not insured");

else

{

if((marst=='M') && (age>=25))

printf("Driver is insured ");

else

{

if(sex=='M')

{

if (age>=30)

printf("Driver is insured");

else

printf("Driver is not insured");

}

else

{

if (age>25)

printf("Driver is insured ");

else

printf("Driver is not insured");

}

}

}

getch();

}

23 P**ROGRAM USING LOGICAL OPERATORS LOGICAL AND && LOGICAL OR || 2ND METHOD**

/\* PROGRAM USING relational operator && == 2 ND method

A company insures the drivers in the following cases

if the driver is married & age is equal or 25

if the driver is unmarried , male & above or equal to 30 years of age

if the dirver is unmarried , female & above 25 years of age

Assume that marital status for married is M & for unmarried U

Assume sex for male is M for female is F

In all other cases the driver is not insured . If marital status , sex and age are the inputs through key board. Program to determine whether the driver is to be insured or not \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

char marst,sex;

printf("Enter marital status & sex");

scanf("%c%c",&marst,&sex);

printf("Marst = %c Sex = %c",marst,sex);

int age;

printf("\nEnter age");

scanf("%d",&age);

printf("Age = %d",age);

if((marst=='M'&&age>=25)||(marst=='U'&&sex=='M'&&age>=30)||(marst=='U'&&sex=='F'&&age>25))

printf("\nDriver is insured");

else

printf("\nDriver is not insured");

getch();

}

24 **PROGRAM USING CONDITIONAL OPERATORS**

/\*PROGRAM USING CONDITIONAL OPERATORS expression1 ? expression2 : expression3

Two numbers are input through the keybord. Program to calculate maximum from them \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int a,b,max;

printf("Enter two numbers");

scanf("%d%d",&a,&b);

max=(a>b?a:b);

printf("Maximum number = %d ",max);

getch();

}

25 **PROGRAM USING CONDITIONAL OPERATORS – 1 ST METHOD**

/\*PROGRAM USING CONDITIONAL OPERATORS 1 st method

Three numbers are input through the keybord. Program to calculate maximum

& minimum numbers from them use expression variable=expression1 ? expression2 : expression3 \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int a,b,c,max,min;

printf("Enter three numbers");

scanf("%d%d%d",&a,&b,&c);

printf("Three numbers are a= %d b = %d c =%d",a,b,c);

max=(a>b?(a>c?a:c):(b>c?b:c));

min=(a<b?(a<c?a:c):(b<c?b:c));

printf("\nMaximum number = %d ",max);

printf("\nMinimum number = %d ",min);

getch();

}

26 **PROGRAM USING NESTED if – else**

/\* PROGRAM USING if - else statement 2 nd method

Three no’s are input through the keyboard. Program to determine maximum number from them \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int a,b,c,max;

printf("Enter Three Numbers ");

scanf("%d%d%d",&a,&b,&c);

printf("Three numbers are a=%d b=%d c=%d",a,b,c);

if(a>b)

{

if(a>c)

{

printf("\nMaximum = %d",a);

if(b<c)

printf("\nMinimum = %d",b);

else

printf("\nMinium = %d",c);

}

else

{

printf("\nMaximum = %d",c);

if(a<b)

printf("\nMinimum = %d",a);

else

printf("\nMinium = %d",b);

}

}

else

{

if(b>c)

{

printf("\nMaximum = %d",b);

if(a<c)

printf("\nMinium =%d",a);

else

printf("\nMinium =%d",c);

}

else

{

printf("\nMaximum = %d",c);

if(a<b)

printf("\nMinium =%d",a);

else

printf("\nminium =%d",b);

}

}

getch();

}

27 **PROGRAM USING if – else statement - Profit & Loss calculation**

/\*PROGRAM USING Multiple if - else statements

If cost price and selling price of an item are input through the keyboard Program to determine Whether the seller has made profit or incurred loss. Also determine how much profit he made or loss he incurred \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

double costpr,sellpr,profit,loss;

printf("Enter cost price & selling price ");

scanf("%lf%lf",&costpr,&sellpr);

if (sellpr>costpr)

{

profit=sellpr-costpr;

printf("\nSeller has made profit of Rs = %lf",profit);

}

else

{

loss=costpr-sellpr;

printf("\nSellar has incurred loss of Rs = %lf",loss);

}

getch();

}

28 **Program using if- else statement – Odd & Even number 1 st Method**

/\* Program using if-else 1st method

Any integer is input through the keyboard.Program to determine whether it is an odd number or even number \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int num,tmp;

printf("Enter any integer ");

scanf("%d",&num);

tmp=num%2;

if (tmp==0)

printf("\nInteger is even number");

else

printf("\nInteger is odd number");

getch();

}

29. **Program using logical operator odd & even number 2 nd Method**

/\* Program using logical NOT operator ! 2 nd method

Any integer is input through the keyboard.Program to determine whether it is an odd number or even number \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int num,tmp;

printf("Enter any integer ");

scanf("%d",&num);

tmp=num%2;

if (!tmp)

printf("\nInteger is even number");

else

printf("\nInteger is odd number");

getch();

}

30 **Program to compare original & its reverse number**

/\*Any five digit number is input thorugh keyboard. Program to obtain reverse number and to determine whether the original number & reversed number are equal or not \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

long int num,tmp,tmp1,revno=0,orino;

printf("Enter any five digit number ");

scanf("%ld",&num);

orino=num;

tmp=num/10000;

tmp1=num%10000;

revno=revno+tmp;

num=tmp1;

tmp=num/1000;

tmp1=num%1000;

revno=revno+tmp\*10;

num=tmp1;

tmp=num/100;

tmp1=num%100;

revno=revno+tmp\*100;

num=tmp1;

tmp=num/10;

tmp1=num%10;

revno=revno+tmp\*1000+tmp1\*10000;

printf("\nOriginal Number = %ld",orino);

printf("\nReverse number = %ld",revno);

if(orino==revno)

printf("\nOriginal & Reversed number are equal");

else

printf("\nOriginal & Reversed number are not equal");

getch();

}

31 **Program using logical operator – Leap Year 1 st method**

/\*Program using Mod operator % & Logical no ! operator - 1st method

Any year is input through the keyboard. Program to determine whether the year is leap year or not\*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int year,tmp;

printf("Enter any year ");

scanf("%d",&year);

tmp=year%4;

if (!tmp) /\* !tmp means tmp==0 \*/

printf("\nYear is leap year");

else

printf("\nYear is not leap year");

getch();

}

32 **Leap Year Program using logical and logical or - 2nd method**

/\*Program using Mod operator % & Logical && || operators - 2 nd method

Any year is input through the keyboard. Program to determine whether the year is leap year or not\*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int year,tmp,tmp1;

printf("Enter any year ");

scanf("%d",&year);

tmp=year%4;

tmp1=year%10;

printf("\nQuotient tmp = %d & reminder tmp1 =%d",tmp,tmp1);

if (tmp==0&&(tmp1==0||tmp1==4||tmp1==8||tmp1==2||tmp1==6))

printf("\nYear is leap year");

else

printf("\nYear is not leap year");

getch();

}

33 **Leap Year program – using conditional operator – 3rd method**

/\*Program using conditional operators - 3 rd method

Any year is input through the keyboard. Program to determine whether the year is leap year or not\*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int year,tmp;

char ch;

printf("Enter any year ");

scanf("%d",&year);

tmp=year%4;

ch=(tmp==0?'Y':'N');

if(ch=='Y')

printf("\nYear is leap year");

else

printf("\nYear is not leap year");

getch();

}

34 **Program using logical operators – To find type of letters capital , small etc.**

/\*Program using Logical operators && || 1 st method

Any character is entered through the keyboard.Program to determine Whether the character

is a capital letter , a small case letter , a digit or a special symbol Use following table

which shows the range of ascii values for various characters

characters Ascii values

A - Z 65 - 90

a - z 97 - 122

0 - 9 48 - 57

special symbols 0 - 47, 58 - 64, 91 - 96, 123 - 127 \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

char ch;

int code;

printf("Enter any character ");

scanf("%c",&ch);

code=ch;

if (code>=65&&code<=90)

{

printf("\nEntered Character is = %c",ch);

printf("\nEntered character is Capital letter");

}

if (code>=97&&code<=122)

{

printf("\nEntered Character is = %c",ch);

printf("\nEntered character is Small Case letter");

}

if (code>=48&&code<=57)

{

printf("\nEntered Character is = %c",ch);

printf("\nEntered character is Digit");

}

if ((code>=0&&code<=47)||(code>=58&&code<=64)||(code>=91&&code<=96)||(code>=123&&code<=127))

{

printf("\nEntered Character is = %c",ch);

printf("\nEntered character is Special symbol");

}

getch();

}

35 **Using conditional operators – To find type of letter small case or special symbol**

/\*Program using conditional operators

Any character is entered through the keyboard.Program to determine Whether the character is a small case letter , or a special symbol Use following table which shows the range of ascii values for various

characters

characters Ascii values

a - z 97 - 122

special symbols 0 - 47, 58 - 64, 91 - 96, 123 - 127 \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

char ch,ch1;

int code;

printf("Enter any character ");

scanf("%c",&ch);

code=ch;

ch1=((code>=97&&code<=122)?'L':((code>=0&&code<=47)||(code>=58&&code<=64)||(code>=91&&code<=96)||(code>=123&&code<=127))?'S':'F');

if (ch1=='L')

{

printf("\nEntered Character is = %c",ch);

printf("\nEntered character is Small case letter ");

}

else

{

if (ch1=='S')

{

printf("\nEntered Character is = %c",ch);

printf("\nEntered character is Special symbol ");

}

else

{

printf("\nEntered Character is = %c",ch);

printf("\nEntered character is neither samll case letter or not special symbol");

}

}

getch();

}

36 **PROGRAM UISING NESTED if – else many conditions**

/\*An Insurance company follows following rules to calculate premium

1) If person's health is excellent and the person is between 25 and 35 years of age and lives in a city and is a male then the premium is Rs 4 per thousand and his policy amount cannot exceed Rs 2 lakhs

2) if person satifies all the above conditions except that the sex is

female the the primium Rs 3 per thousand and her policy amount cannot exceed Rs. 1 lakhs

3) If a person's health is poor and the person is between 25 and 35 years of age and lives in a village and is a male then the premium Rs 6 per thousand and his policy amount cannot exceed Rs 10000

4) In all other cases person is not insured

Note Use E for Excellent & P for poor to enter data in person's health & Use C for city & V for village

Program to print output whether the person should be insured or not, his / her premium rate & maximum amount for which he can insured \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

char phl,sex,live;

int age;

long int pamt,pramt;

printf("Enter Persons health ,sex & where he livers");

scanf("%c%c%c",&phl,&sex,&live);

printf("\nHealth = %c Sex = %c live =%c",phl,sex,live);

printf("\nEnter age ");

scanf("%d",&age);

printf("Enter policy amount");

scanf("%ld",&pamt);

printf("age=%d",age);

printf("Policy amount = %ld",pamt);

getch();

if (phl=='E'&&(age>25&&age<35)&&live=='C'&&sex=='M'&&pamt<=200000)

{

pramt=pamt\*4/1000;

printf("\nPerson is insured \nHe lives in %c & he is %c ",live,sex);

printf("\nPolicy amount Rs %ld & \nPremiumm amt %ld",pamt,pramt);

printf("\nMaximum amount for which person can be insured is Rs 200000/-");

}

else

{

if(phl=='E'&&(age>25&&age<35)&&live=='C'&&sex=='F'&&pamt<=100000)

{

pramt=pamt\*3/1000;

printf("\nPerson is insured \nHe lives in %c & he is %c ",live,sex);

printf("\nPolicy amount Rs %ld & \nPremiumm amt %ld",pamt,pramt);

printf("\nMaximum amount for which person can be insured is Rs 100000/-");

}

else

{

if(phl=='P'&&(age>25&&age<35)&&live=='V'&&sex=='M'&&pamt<=10000)

{

pramt=pamt\*6/1000;

printf("\nPerson is insured \nHe lives in %c & he is %c ",live,sex);

printf("\nPolicy amount Rs %ld & \nPremiumm amt %ld",pamt,pramt);

printf("\nMaximum amount for which person can be insured is Rs 10000/-");

}

else

printf("\nPerson is not insured");

}

}

getch();

}

37 **Program using if-else – many conditions**

/\*A certain grade of steel is graded according to the following conditions

1 Hardness must be equal or grater than 50

2 Carbon conent must be equal or less than 0.7

3 Tensile strenth must be equal or grater than 5600

The grades are as follows

Grade 10 if all the three conditions are met

Grade 9 if conditions 1 & 2 are met

Grate 8 if conditions 2 & 3 are met

Grade 7 if conditions 1 & 3 are met

Grade 6 if only one condition is met

Grade 5 if none of the conditions are met

if hardness , carbon content & tensile strength are inputs through the keyboard. Program to determine the grades of the steel \*/

#include<stdio.h>

#include<conio.h>

void main()

{

clrscr();

int hard,tstr;

float cc;

printf("Enter hardness less than 100");

scanf("%d",&hard);

printf("Enter carbon content less tha 1.0");

scanf("%f",&cc);

printf("Enter Tensile strenght less than 10000");

scanf("%d",&tstr);

printf("\n Hardness = %d Tensile strenght %d & carbon content %f",hard,tstr,cc);

if(hard>=50&&tstr>=5600&&cc<=0.7)

printf("\nGrade of steel is Grade 10");

else

{

if(hard>=50&&cc<=0.7)

printf("\nGrade of steel is Grade 9");

else

{

if(cc<=0.7&&tstr>=5600)

printf("\nGrade of steel is Grade 8");

else

{

if(hard>=50&&tstr>=5600)

printf("\nGrade of steel is Grade 7");

else

{

if(hard<50&&tstr<5600&&cc>0.7)

printf("\nGrade of steel is Grade 5");

else

{

if(hard>=50&&(cc>0.7&&tstr<5600))

printf("\nGrade of steel is Grade 6");

else

{

if(cc<=0.7&&(hard<50&&tstr<5600))

printf("\nGrade of steel is Grade 6");

else

{

if(tstr>=5600&&(cc>0.7&&hard<50))

printf("\nGrade of steel is Grade 6");

}

}

}

}

}

}

}

getch();

}