1. **Write a program which takes the month number as an input and display number of days in that month.**

#include<stdio.h>

int main()

{

int n;

printf("Enter the month number: ");

scanf("%d",&n);

if(n<=7&&n%2==1)

printf("Number of days: 31");

else if(n>=8&&n%2==0)

printf("Number of days: 31");

else if(n>12||n<1)

printf("Invalid input.");

else

printf("Number of days: 30");

return 0;

}

1. **Write a menu driven program with the following options:**

**a. Addition**

**b. Subtraction**

**c. Multiplication**

**d. Division**

**e. Exit**

#include<stdio.h>

#include<stdlib.h>

int main()

{

int a,b,n;

while(1)

{

printf("1.Addition\n2.Substraction\n3.Multiplication\n4.Division\n5.Exit\nEnter your choice: ");

scanf("%d",&n);

switch(n)

{

case 1:

printf("Enter 2 numbers: ");

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

printf("Addition of %d and %d is %d\n",a,b,a+b);

break;

case 2:

printf("Enter 2 numbers: ");

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

printf("Substration of %d and %d is %d\n",a,b,a-b);

break;

case 3:

printf("Enter 2 numbers: ");

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

printf("Multiplication of %d and %d is %d\n",a,b,a\*b);

break;

case 4:

printf("Enter 2 numbers: ");

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

printf("Division of %d by %d is %d\n",a,b,a/b);

break;

default:

printf("Invalid Input!!\n");

break;

case 5:

exit(0);

}

}

return 0;

}

1. **Write a program which takes the day number of a week and displays a unique greeting message for the day.**

#include<stdio.h>

int main()

{

int n;

printf("Enter the day number: ");

scanf("%d",&n);

switch(n)

{

case 1: printf("Today is Sunday\n");

break;

case 2: printf("Today is Monady\n");

break;

case 3: printf("Today is Tuesday\n");

break;

case 4: printf("Today is Wednesday\n");

break;

case 5: printf("Today is Thursday\n");

break;

case 6: printf("Today is Friday\n");

break;

case 7: printf("Today is Saturday\n");

break;

default: printf("Invalid input!!!");

}

return 0;

}

1. **Write a menu driven program with the following options:**

**a. Check whether a given set of three numbers are lengths of an isosceles triangle or not**

**b. Check whether a given set of three numbers are lengths of sides of a right angled triangle or not**

**c. Check whether a given set of three numbers are equilateral triangle or not**

**d. Exit**

#include<stdio.h>

#include<stdlib.h>

int main()

{

int a,b,c,n;

while(1)

{

printf("\nEnter your choice:\n");

printf("1. Check whether a given set of three numbers are lengths of an isosceles triangle or not\n");

printf("2. Check whether a given set of three numbers are lengths of sides of a right angled triangle or not\n");

printf("3. Check whether a given set of three numbers are equilateral triangle or not\n");

printf("4. Exit\n");

scanf("%d",&n);

switch(n)

{

case 1:

printf("Enter the length of sides: ");

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

if(a==b||b==c||c==a)

printf("It is a isosceles triangle.");

else

printf("It is not isosceles triangle.");

break;

case 2:

printf("Enter the length of sides: ");

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

if(a\*a==b\*b+c\*c||b\*b==a\*a+c\*c||c\*c==a\*a+b\*b)

printf("It is a right angled triangle.");

else

printf("It is a not right angled triangle.");

break;

case 3:

printf("Enter the length of sides: ");

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

if(a==b&&b==c)

printf("It is a equilateral triangle.");

else

printf("It is a not equilateral triangle.");

break;

case 4:

exit(0);

break;

default:

printf("Invalid input.");

break;

}

}

return 0;

}

1. **Convert the following if-else-if construct into switch case:**

**if(var == 1)**

**System.out.println("good");**

**else if(var == 2)**

**System.out.println("better");**

**else if(var == 3)**

**System.out.println("best");**

**else**

**System.out.println("invalid");**

#include<stdio.h>

int main()

{

int var;

printf("Enter a number: ");

scanf("%d",&var);

switch(var)

{

case 1:

printf("good");

break;

case 2:

printf("better");

break;

case 3:

printf("best");

break;

default:

printf("invalid");

break;

}

return 0;

}

1. **Program to check whether a year is a leap year or not. Using switch statement**

#include<stdio.h>

int main()

{

int n;

printf("Enter the year: ");

scanf("%d",&n);

switch((n%4==0&&n%100!=0)||(n%4==0&&n%400==0))

{

case 1:

printf("%d is leap year.",n);

break;

case 0:

printf("%d is not leap year.",n);

break;

}

return 0;

}

1. **Program to take the value from the user as input electricity unit charges and calculate total electricity bill according to the given condition . Using the switch statement.**

**For the first 50 units Rs. 0.50/unit**

**For the next 100 units Rs. 0.75/unit**

**For the next 100 units Rs. 1.20/unit**

**For units above 250 Rs. 1.50/unit**

#include<stdio.h>

int main()

{

float bill,unit,total;

printf("Enter amount of unit: ");

scanf("%f",&unit);

switch(unit<=50)

{

case 1:

bill=unit\*0.5;

break;

case 0:

switch(unit<=150)

{

case 1:

bill=(50\*0.5)+(unit-50)\*0.75;

break;

case 0:

switch(unit<=250)

{

case 1:

bill=(50\*0.5)+(100\*0.75)+(unit-150)\*1.20;

break;

case 0:

switch(unit>250)

{

case 1:

bill=(50\*0.5)+(100\*0.75)+(100\*1.20)+(unit-250)\*1.50;

break;

}

break;

}

break;

}

break;

}

total=bill+(bill\*0.2);

printf("Your electricity bill is %.2f",total);

return 0;

}

1. **Program to convert a positive number into a negative number and negative number into a positive number using a switch statement.**

#include<stdio.h>

int main()

{

int a;

printf("Enter a number: ");

scanf("%d",&a);

switch(a>=0)

{

case 1:

printf("%d",-a);

break;

case 0:

printf("%d",-a);

break;

}

return 0;

}

1. **Program to Convert even number into its upper nearest odd number Switch Statement.**

#include<stdio.h>

int main()

{

int a;

printf("Enter a number: ");

scanf("%d",&a);

switch(a%2==0)

{

case 1:

printf("%d",a+1);

break;

case 0:

printf("%d",a);

break;

}

return 0;

}

1. **C program to find all roots of a quadratic equation using switch case**

#include<stdio.h>

int main()

{

int a,b,c,d;

printf("Enter a,b,c respectively: ");

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

d=b\*b-4\*a\*c;

switch(d>0)

{

case 1:

printf("The quadratic equation will have real roots");

break;

case 0:

printf("The quadratic equation will have imaginary roots");

break;

default:

printf("The quadratic equation will have equal roots ");

break;

}

return 0;

}