/\*1. C program to read weekday number and print weekday name using switch.\*/

#include<stdio.h>

int main()

{

int wDay;

printf("Enter weekday number (0-6): ");

scanf("%d",&wDay);

switch(wDay)

{

case 0:

printf("Sunday");

break;

case 1:

printf("Monday");

break;

case 2:

printf("Tuesday");

break;

case 3:

printf("Wednesday");

break;

case 4:

printf("Thursday");

case 5:

printf("Friday");

break;

case 6:

printf("Saturday");

break;

        default:

printf("Invalid weekday number.");

}

printf("\n");

return 0;

}

/\*2. C program to design calculator with basic operations using switch.\*/

#include <stdio.h>

int main()

{

int num1,num2;

float result;

char ch; //to store operator choice

printf("Enter first number: ");

scanf("%d",&num1);

printf("Enter second number: ");

scanf("%d",&num2);

printf("Choose operation to perform (+,-,\*,/,%): ");

scanf(" %c",&ch);

result=0;

switch(ch)

{

case '+':

result=num1+num2;

break;

case '-':

result=num1-num2;

break;

case '\*':

result=num1\*num2;

break;

case '/':

result=(float)num1/(float)num2;

break;

case '%':

result=num1%num2;

break;

        default:

printf("Invalid operation.\n");

}

printf("Result: %d %c %d = %f\n",num1,ch,num2,result);

return 0;

}

/\*3. C program to find sum of all digits using recursion.\*/

#include <stdio.h>

//function to calculate sum of all digits

int sumDigits(int num)

{

static int sum=0;

if(num>0)

{

sum+=(num%10); //add digit into sum

sumDigits(num/10);

}

else

{

return sum;

}

}

int main()

{

int number,sum;

printf("Enter a positive integer number: ");

scanf("%d",&number);

sum=sumDigits(number);

printf("Sum of all digits are: %d\n",sum);

return 0;

}

/\*4. C Program to convert temperature from Fahrenheit to Celsius and vice versa.\*/

#include <stdio.h>

int main()

{

float fh,cl;

int choice;

printf("\n1: Convert temperature from Fahrenheit to Celsius.");

printf("\n2: Convert temperature from Celsius to Fahrenheit.");

printf("\nEnter your choice (1, 2): ");

scanf("%d",&choice);

if(choice ==1){

printf("\nEnter temperature in Fahrenheit: ");

scanf("%f",&fh);

cl= (fh - 32) / 1.8;

printf("Temperature in Celsius: %.2f",cl);

}

else if(choice==2){

printf("\nEnter temperature in Celsius: ");

scanf("%f",&cl);

fh= (cl\*1.8)+32;

printf("Temperature in Fahrenheit: %.2f",fh);

}

else{

printf("\nInvalid Choice !!!");

}

return 0;

}

/\*5.Program to Find Roots of a Quadratic Equation\*/

#include <stdio.h>

#include <math.h>

int main()

{

double a, b, c, discriminant, root1, root2, realPart, imaginaryPart;

printf("Enter coefficients a, b and c: ");

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

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

if (discriminant > 0)

{

root1 = (-b+sqrt(discriminant))/(2\*a);

root2 = (-b-sqrt(discriminant))/(2\*a);

printf("root1 = %.2lf and root2 = %.2lf",root1 , root2);

}

else if (discriminant == 0)

{

root1 = root2 = -b/(2\*a);

printf("root1 = root2 = %.2lf;", root1);

}

else

{

realPart = -b/(2\*a);

imaginaryPart = sqrt(-discriminant)/(2\*a);

printf("root1 = %.2lf+%.2lfi and root2 = %.2f-%.2fi", realPart, imaginaryPart, realPart, imaginaryPart);

}

return 0;

}

/\*6.Integer as a Sum of Two Prime Numbers\*/

#include <stdio.h>

int checkPrime(int n);

int main(){

int n, i, flag = 0;

printf("Enter a positive integer: ");

scanf("%d", &n);

for(i = 2; i <= n/2; ++i) {

if (checkPrime(i) == 1) {

if (checkPrime(n-i) == 1) {

printf("%d = %d + %d\n", n, i, n - i);

flag = 1;

}

}

}

if (flag == 0)

printf("%d cannot be expressed as the sum of two prime numbers.", n);

return 0;

}

int checkPrime(int n)

{

int i, isPrime = 1;

for(i = 2; i <= n/2; ++i)

{

if(n % i == 0) {

isPrime = 0;

break;

}

}

return isPrime;

}

/\*7.C program to generate Fibonacci triangle.\*/

#include <stdio.h>

#include <stdlib.h>

int main()

{

int a=0,b=1,i,c,n,j;

system(“cls”);

printf(“Enter the limit:”);

scanf(“%d”,&n);

for(i=1;i<=n;i++)

{

a=0;

b=1;

printf(“%d\t”,b);

for(i=1;j<i;j++)

{

c=a+b;

printf(“%d\t”,c);

a=b;

b=c;

}

printf(“\n”);

}

return 0;

}