**MENU PROGRAMMING AND USER DEFINED FUNCTIONS**

**Write a program to for Menu Index (Choice) from 1 to 4**

1. Factorial (2) Prime Numbers (3) Even / Odd and (4) Exit

#include<stdio.h>

/\* User Defined function prototypes \*/

void factorial(int);

void prime(int);

void even\_odd(int);

**void main()**

**{**

int i, num1, choice, x;

while(1)

{

printf("Menu is below: \n");

printf("1. Factorial\n");

printf("2. Prime\n");

printf("3. Even/odd\n");

printf("4. Exit\n");

printf("Enter your choice : \t");

scanf("%d", &choice);

printf("Enter a number \t");

scanf("%d", &x);

switch(choice)

{

case 1:

factorial(x); // function call

break;

case 2:

prime(x); // function call

break;

case 3:

even\_odd(x); // function call

break;

case 4:

exit(0);

default:

printf("Input choice is wrong. \n");

}

// switch

}

//while(1)

system ("pause");

}

**//User Defined Function’s Definition**

void factorial (int num)

{

int i, f=1;

//printf("Enter a number to find a factorial \t");

//scanf("%d", &num);

for(i= num; i>1; i--)

f=f\*i;

printf("Factorial = %d\n",f);

}// factorial function closing

//**FUNCTION FOR PRIME NUMBERS**

void prime(int num)

{

int i;

//printf("Enter a number \t");

//scanf("%d", &num);

i=2;

while(i <= (num/2))

{

if(num % i == 0)

{

printf("Number is not prime \n");

break;

}

i++;

}

if(i == (num/2+1))

printf("Number is prime \n");

}// prime function closing

**//FUNCTION FOR EVEN / ODD**

void even\_odd(int num)

{

int x;

//printf("Enter a number \n");

//scanf("%d", &x);

if(num%2 == 0)

printf("Even number \n");

else

printf("Odd number \n");

} // prime\_odd function closing

**// GLOBAL VARIABLE DECLARATION AND USE.**

#include <stdio.h>

void printLuckyNumber(); //function prototype

int iLuckyNumber; //global variable

void main()

{

//int iLuckyNumber;

printf("\nEnter your lucky number: ");

scanf("%d", &iLuckyNumber);

printLuckyNumber();

system("pause");

}

**//function definition**

void printLuckyNumber()

{

//int iLuckyNumber;

printf("\nYour lucky number is: %d\n", iLuckyNumber);

}

//**USE CALCULATOR AS A FUNCTION**

#include<stdio.h>

Void main( )

{

int choice, num1, num2 ;

while ( 1 )

{

printf ( "\n1. add two numbers" ) ;

printf ( "\n2. subtract two number" ) ;

printf ( "\n3. multiply two numbers" ) ;

printf ( "\n4. Exit" ) ;

printf ( "\nYour choice? " ) ;

scanf ( "%d", &choice ) ;

switch ( choice )

{

case 1 :

/\* logic for add two numbers \*/

printf("Enter two numbers :\t");

scanf("%d %d", &num1, &num2);

printf("Sum = %d\n", num1+num2);

break ;

case 2 :

**/\* logic for subtract two numbers \*/**

printf("Enter two numbers :\t");

scanf("%d %d", &num1, &num2);

printf("Sum = %d\n", num1-num2);

break ;

case 3 :

**/\* logic for multiply two numbers \*/**

printf("Enter two numbers :\t");

scanf("%d %d", &num1, &num2);

printf("Sum = %d\n", num1\*num2);

break ;

case 4 :

exit(0) ;

default;

printf("enter correct choice\n");

}

}

}

//**CONVERSION FROM DECIMAL TO BINARY (16 BIT CODE)**

#include<stdio.h>

#include<stdlib.h>

void main(void)

{

int num1=255;

system(“cls");

printf("%d", num1);

num1/=2;

printf("%d", num1%2);

num1/=2;

printf("%d", num1%2);

num1/=2;

printf("%d", num1%2);

num1/=2;

printf("%d", num1%2);

num1/=2;

printf("%d", num1%2);

num1/=2;

printf("%d", num1%2);

num1/=2;

printf("%d", num1%2);

num1/=2;

}

#include <stdio.h>

#include <conio.h>

long decimalToBinary(long n);

int main() {

long decimal;

printf("Enter a decimal number\n");

scanf("%ld", &decimal);

printf("Binary number of %ld is %ld", decimal, decimalToBinary(decimal));

getch();

return 0;

}

/\* Function to convert a decinal number to binary number \*/

long decimalToBinary(long n) {

int remainder;

long binary = 0, i = 1;

while(n != 0) {

remainder = n%2;

n = n/2;

binary= binary + (remainder\*i);

i = i\*10;

}

return binary;

}