Name: Khalid Hasan Riad

ID: 221-35-911

Problem 1: .Write a program to print yours name, date of birth, id and blood group.

Solution:

#include <stdio.h>

int main()

{

printf("Name: Khalid Hasan Riad\n");

printf("Date of birth: 25-02-2002\n");

printf("ID:221-35-911\n");

printf("Blood group: B+\n");

return 0;

}

Problem 2: Write a program that take two integer as input and print the result of  
addition, subtraction, multiplication, division.

Solution:

#include <stdio.h>

int main()

{

int a, b, addition, subtraction, multiply, division;

printf("Enter the value of a:");

scanf("%d", &a);

printf("Enter the value of b:");

scanf("%d", &b);

addition = a + b;

subtraction = a - b;

multiply = a \* b;

division = a / b;

printf("Value of Addition=%d\n", addition);

printf("Value of Subtract=%d\n", subtraction);

printf("Value of Multiply=%d\n", multiply);

printf("Value of Division=%d\n", division);

return 0;

}

Problem 3: Write a program that takes two float number as input and show the result of  
addition and subtraction.

Solution:

#include<stdio.h>

int main()

{

float a,b,addition,subtraction;

printf("Enter a float number:");

scanf("%f",&a);

printf("Enter a float number:");

scanf("%f",&b);

addition=a+b;

subtraction=a-b;

printf("Addition:%.2f\n",addition);

printf("Subtraction:%.2f\n",subtraction);

return 0;

}

Problem 4: Enter a seven digit number and show the result of sum and show the problems  
in reverse order.

Solution :

#include<stdio.h>

int main(){

int n, i, temp, rem, sum=0, reverse=0;

printf("Enter a seven digit number: ");

scanf("%d", &n);

temp = n;

while(temp!=0){

rem = temp%10;

reverse = reverse \* 10 + rem;

temp/=10;

}

temp = n;

while(temp!=0){

rem = temp%10;

sum = sum + rem;

temp/=10;

}

printf("After reverse: %d\n", reverse);

printf("Sum of those number: %d\n", sum);

return 0;

}

Problem 5: Write a program to find out your grade in final exam. Taking the marks input from user.

Follow DIU grading method.(use switch case).

Solution:

#include <stdio.h>

int main()

{

int mark;

printf("enter marks(0-100):\n");

scanf("%d", &mark);

switch (mark)

{

case 80 ... 100:

printf("A+");

break;

case 75 ... 79:

printf("A");

break;

case 70 ... 74:

printf("A-");

break;

case 65 ... 69:

printf("B+");

break;

case 60 ... 64:

printf("B");

break;

case 55 ... 59:

printf("B-");

break;

case 50 ... 54:

printf("C+");

break;

case 45 ... 49:

printf("C+");

break;

case 40 ... 44:

printf("D");

break;

case 00 ... 39:

printf("F");

break;

defult:

printf("invalid");

}

return 0;

}

Problem 6 : Write a program to find the factorial series.

Solution :

#include <stdio.h>

int main()

{

int i, fact = 1, number;

printf("Enter a number: ");

scanf("%d", &number);

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

{

fact = fact \* i;

}

printf("Factorial of %d is: %d", number, fact);

return 0;

}

Problem 7: Write a program that do the following operations(using).

         i)Ascending

         ii)Descending

         iii)Maximum

         iv)Minimum

Solution :

#include <stdio.h>

int main()

{

int n, i, j, count = 0;

printf("How many elements: ");

scanf("%d", &n);

int arr[n];

printf("Enter %d integer numbers: ", n);

for (i = 0; i < n; i++)

{

scanf("%d", &arr[i]);

}

printf("Ascending are: ");

for (i = 0; i < n; i++)

{

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

{

if (arr[i] > arr[j])

{

int temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

}

}

for (i = 0; i < n; i++)

{

printf("%d ", arr[i]);

}

printf("\nDescending are: ");

for (i = 0; i < n; i++)

{

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

{

if (arr[i] < arr[j])

{

int temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

}

}

for (i = 0; i < n; i++)

{

printf("%d ", arr[i]);

}

int max = arr[0];

for (j = 0; j < n; j++)

{

if (arr[j] > max)

{

max = arr[j];

}

}

printf("\nMaximum: %d", max);

int min = arr[0];

for (j = 0; j < n; j++)

{

if (arr[j] < min)

{

min = arr[j];

}

}

printf("\nMinimum: %d", min);

return 0;

}

Problem 8: Write a program that takes an array as input and print the odd number in one array and even in other array.

Solution:

#include <stdio.h>

int main()

{

int array[100], i, num;

printf("Enter the size of an array \n");

scanf("%d", &num);

printf("Enter the elements of the array \n");

for (i = 0; i < num; i++)

{

scanf("%d", &array[i]);

}

printf("Even numbers in the array are: ");

for (i = 0; i < num; i++)

{

if (array[i] % 2 == 0)

{

printf("%d \t", array[i]);

}

}

printf("\n Odd numbers in the array are: ");

for (i = 0; i < num; i++)

{

if (array[i] % 2 != 0)

{

printf("%d \t", array[i]);

}

}

return 0;

}

Problem 9: Write a program to find the following using switch case.

      i)Prime

      ii)Fibonacci

      iii)Palindrome

Solution:

#include <stdio.h>

int main()

{

int op, num, i = 1, count = 0;

int t1 = 0, t2 = 1, next = 0, n;

int reverse = 0, temp;

for (;;)

{

printf("1. Prime or Not Prime.\n");

printf("2. Fibonacci Series.\n");

printf("3. Palindrome Number.\n");

printf("What you want to do : ");

scanf("%d", &op);

switch (op)

{

case 1:

{

printf("Enter integer number:");

scanf("%d", &num);

while (i <= num)

{

if (num % i == 0)

count++;

i++;

}

if (count == 2)

{

printf("%d is a prime number.\n", num);

}

else

{

printf("%d is not a prime number.\n", num);

}

break;

}

case 2:

{

printf("Enter a positive number: ");

scanf("%d", &n);

printf("Fibonacci Series: %d, %d, ", t1, t2);

next = t1 + t2;

while (next <= n)

{

printf("%d ", next);

t1 = t2;

t2 = next;

next = t1 + t2;

printf("\n");

}

break;

}

case 3:

{

printf("Enter integer number: ");

scanf("%d", &n);

while (n != 0)

{

temp = n % 10;

reverse = reverse \* 10 + temp;

n /= 10;

}

printf("Reversed number = %d. \n", reverse);

break;

}

default:

{

printf("Wrong Input.\n");

}

}

}

return 0;

}