MODULE: 3.1 (C Language Fundamental)

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1.WAP to make simple calculator(operation include Addition,Subtraction,Multiplication,Di vision,Modulo)

ANS:-

#include<stdio.h>

int main()

{

char operator;

int num1, num2,ans;

printf("Enter any one operator like , +,-,\*,/,% :");

scanf("%c",&operator);

printf("Enter The First Number:");

scanf("%d",&num1);

printf("Enter The Second Number:");

scanf("%d",&num2);

switch(operator)

{

case '+':

ans=num1+num2;

break;

case '-':

ans=num1-num2;

break;

case '\*':

ans=num1\*num2;

break;

case '/':

ans=num1/num2;

break;

case '%':

ans=num1%num2;

break;

default:

printf("Invalid Opretor");

}

printf("Ans Is %d",ans);

}

OUTPUT:-

Enter any one operator like , +,-,\*,/,:\*

Enter The First Number:2

Enter The Second Number:2

Ans Is 4

2.WAP to swap two numbers without using third variable.

ANS:-

#include<stdio.h>

int main()

{

int a=10,b=20;

{

printf("before swap a=%d b=%d",a,b);

}

a=a+b;//a=30(10+20)

b=a-b;//b=10(30-20)

a=a-b;//a=20(30-10)

printf("\nafter swap a=%d b=%d",a,b);

return 0;

}

OUTPUT:-

before swap a=10 b=20

after swap a=20 b=10

3.WAP to find number is even or odd using ternary operator.

ANS:-

#include<stdio.h>

int main()

{

int num;

printf("enter the numbr :");

scanf("%d",&num);

if (num%2==0)

{

printf(" it is even number\n");

}

else

{

printf("it is odd number\n");

}

return 0;

}

OUTPUT:-

enter the numbr :1

it is odd number

Enter the numbr :2

It is even number

4 WAP to show Monday to Sunday using switch case.

ANS:-

#include<stdio.h>

int main()

{

int day;

printf("\n");

printf("\n1.Monday");

printf("\n2.Tuesday");

printf("\n3.Wednesday");

printf("\n4.Thursday");

printf("\n5.Friday");

printf("\n6.Saturday");

printf("\n7.Sunday");

printf("\nEnter a day:");

scanf("%d",&day);

switch(day)

{ case 1:

printf("Monday");

break;

case 2:

printf("Tuesday");

break;

case 3:

printf("Wednesday");

break;

case 4:

printf("Thursday");

break;

case 5:

printf("Friday");

break;

case 6:

printf("Saturday");

break;

case 7:

printf("Sunday");

break;

default :

printf("Invalid Input");

break;

}

return 0;

}

OUTPUT:-

1.Monday

2.Tuesday

3.Wednesday

4.Thursday

5.Friday

6.Saturday

7.Sunday

Enter a day:4

Thursday

5 WAP to show Vowel Or Consonant using switch case.

ANS:-

#include <stdio.h>

int main()

{

char ch;

printf("Enter any character: ");

scanf("%c", &ch);

switch(ch)

{

case 'a':

case 'e':

case 'i':

case 'o':

case 'u':

case 'A':

case 'E':

case 'I':

case 'O':

case 'U':

printf("Vowel");

break;

default: printf("Consonant");

}

return 0;

}

OUTPUT :-

Enter any character: n

Consonant

Looping programs

• WAP to Print 972 to 897 using for loop

ANS:-

#include<stdio.h>

main()

{

int i,j;

for(i=972;i>=897;i--)

{

printf("\n%d",i);

}

}

OUTPUT :-

972 971 970 969 968 967 966 965 964 963 962 961 960 959 958 957 956 955 954 953 952 951 950 949 948 947 946 945 944 943 942 941 940 939 938 937 936 935 934 933 932 931 930 929 928 927 926 925 924 923 922 921 920 919 918 917 916 915 914 913 912 911 910 909 908 907 906 905 904 903 902 901 900 899 898 897

2.WAP to take 10 no. Input from user and find out…

ANS:-

#include<stdio.h>

int main()

{

int n,i,counteven=0,countodd=0,sumeven=0,sumodd=0;

for(i=1;i<=10;i++)

{

printf("Enter number %d: ",i);

scanf("%d",&n);

if(n%2==0)

{

counteven++;

sumeven=sumeven+n;

}

else

{

countodd++;

sumodd=sumodd+n;

}

}

printf("Total even numbers is: %d\n",counteven);

printf("Total odd numbers is: %d\n",countodd);

printf("Sum of even numbers is: %d\n",sumeven);

printf("Sum of odd numbers is: %d",sumodd);

return 0;

}

OUTPUT :-

Enter number 1: 12

Enter number 2: 45

Enter number 3: 78

Enter number 4: 3698

Enter number 5: 54

Enter number 6: 78

Enter number 7: 32

Enter number 8: 6

Enter number 9: 3

Enter number 10: 5

Total even numbers is: 7

Total odd numbers is: 3

Sum of even numbers is: 3958

Sum of odd numbers is: 53

• WAP to print table up to given numbers

ANS:-

#include<stdio.h>

int main()

{

int n,i,j;

printf("Enter a number upto which you want to print table: ");

scanf("%d",&n);

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

{

for(j=1;j<=10;j++)

{

printf("%d\*%d = %d\n",i,j,i\*j);

}

printf("\n");

}

return 0;

}

OUTPUT:-

Enter a number upto which you want to print table: 2

1\*1 = 1

1\*2 = 2

1\*3 = 3

1\*4 = 4

1\*5 = 5

1\*6 = 6

1\*7 = 7

1\*8 = 8

1\*9 = 9

1\*10 = 10

2\*1 = 2

2\*2 = 4

2\*3 = 6

2\*4 = 8

2\*5 = 10

2\*6 = 12

2\*7 = 14

2\*8 = 16

2\*9 = 18

2\*10 = 20

•WAP to print factorial of given number

ANS:-

#include<stdio.h>

int main()

{

int n,i,fact=1;

printf("Enter a number to print factorial: ");

scanf("%d",&n);

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

{

fact\*=i;

}

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

}

OUTPUT:-

Enter a number to print factorial: 3

Factorial of 3 is: 6

• WAP to print Fibonacci series up to given numbers

ANS:-

#include<stdio.h>

int main()

{

int i,j,m=0, n=1,newterm = m + n;

printf("Enter The Fibonacci Siries:");

scanf("%d",&j);

printf("\n%d \n%d",m,n);

for(i=3; i<=j; i++)

{

printf("\n%d",newterm);

m=n;

n=newterm;

newterm=m+n;

}

}

OUTPUT:-

Enter The Fibonacci Siries:5

0

1

1

2

3

• WAP to print number in reverse order

ANS :-

#include<stdio.h>

int main()

{

int n,last,reverse=0;

printf("Enter a number: ");

scanf("%d",&n);

while(n!=0)

{

last=n%10;

reverse=reverse\*10+last;

n/=10;

}

printf("Reversed Number is %d",reverse);

}

OUTPUT:-

Enter a number: 12345

Reversed Number is 54321

•Write a program to find out the max from given number

ANS:-

#include<stdio.h>

int main()

{

int n,max=0;

printf("Enter Number: ");

scanf("%d",&n);

while(n!=0)

{

if(n%10>max)

{

max=n%10;

}

n/=10;

}

printf("Lasgest Number = %d",max);

}

OUTPUT :-

Enter Number: 12345

Lasgest Number = 5

• Write a program make a summation of given number

ANS:-

#include<stdio.h>

int main()

{

int n,sum=0;

printf("Enter a number: ");

scanf("%d",&n);

while(n>0)

{

sum+=n%10;

n/=10;

}

printf("Summation of a number is: %d",sum);

return 0;

}

OUTPUT:-

Enter a number: 5678

Summation of a number is: 26

•Write a program you have to make a summation of first and last Digit.

ANS :-

#include<stdio.h>

int main()

{

int n,first,last,sum=0;

printf("Enter a number: ");

scanf("%d",&n);

last=n%10;

while(n>10)

{

n/=10;

first=n;

}

sum=first+last;

printf("Summ of a first and last digit is: %d",sum);

return 0;

}

OUTPUT :-

Enter a number: 12345

Summ of a first and last digit is: 6

Patterns:1

ANS:-

#include<stdio.h>

main()

{

int n=5,i,j;

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

{

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

{

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

}

printf("\n");

}

}

OUTPUT :-

1

10

101

1010

10101

Patterns:2

ANS :-

#include<stdio.h>

int main()

{

int i,j,k=1,n;

printf("Enter the no of lines\n");

scanf("%d",&n);

printf("Floyd's Triangle using alphabets/characters\n");

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

{

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

{

printf("%4c",(char)(k+64)); //4 spaces

}

printf("\n");

}

return 0;

}

OUTPUT :-

Enter the no of lines

5

Floyd's Triangle using alphabets/characters

A

B C

D E F

G H I J

K L M N O

Patterns:3

ANS:-

#include <stdio.h>

int main()

{

int i, space, rows, k = 0;

printf("Enter the number of rows: ");

scanf("%d", &rows);

for (i = 1; i <= rows; ++i, k = 0) {

for (space = 1; space <= rows - i; ++space) {

printf(" ");

}

while (k != 2 \* i - 1) {

printf("\* ");

++k;

}

printf("\n");

}

return 0;

}

OUTPUT :-

Enter the number of rows: 5

\*

\* \* \*

\* \* \* \* \*

\* \* \* \* \* \* \*

\* \* \* \* \* \* \* \* \*

Patterns:4

ANS:-

#include <stdio.h>

int main()

{

int i, j, rows;

printf("Enter the number of rows: ");

scanf("%d", &rows);

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

{

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

{

printf("\* ");

}

printf("\n");

}

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

{

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

printf("\* ");

}

printf("\n");

}

return 0;

}

OUTPUT :-

Enter the number of rows: 5

\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

Patterns:5

ANS :-

#include <stdio.h>

int main() {

int rows, i, j, number = 1;

printf("Enter the number of rows: ");

scanf("%d", &rows);

for (i = 1; i <= rows; i++) {

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

printf("%d ", number);

++number;

}

printf("\n");

}

return 0;

}

OUTPUT:-

Enter the number of rows: 5

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

Patterns:6

ANS :-

#include<stdio.h>

main()

{

int i,j,n;

printf("Enter the no of lines\n");

scanf("%d",&n);

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

{

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

{

printf("%c",(char)(j+64));

}

printf("\n");

}

}

OUTPUT :-

Enter the no of lines

5

A

AB

ABC

ABCD

ABCDE