Assignment no. 2

---------------------------------------------------------------

Ques:1:-Display This Information using printf

1. Your Name

2. Your Birth date

3. Your Age

4. Your Address

Ans:-

#include<stdio.h>

main()

{

printf("Abhishek");

printf("\n20");

printf("\nAhmedabad");

printf("\nFull stack with java");

}

—--------------------------------------------------------------

Ques:2:-Write a program to make Simple calculator (to make addition, subtraction,

multiplication, division and modulo)

Ans:-

#include<stdio.h>

main()

{

int number1,number2,Addition,Subtraction,Multiply;

float Divide,Modulo;

printf("Enter the first number1:");

scanf("%d",&number1);

printf("Enter the second number2:");

scanf("%d",&number2);

Addition = number1 + number2;

Subtraction = number1 - number2;

Multiply = number1 \* number2;

Divide = number1 / number2;

Modulo = number1 % number2;

printf("\n\nAddition is: %d",Addition);

printf("\n\nSubtraction is: %d",Subtraction);

printf("\n\nMultiply is: %d",Multiply);

printf("\n\nDivide is: %.2f",Divide);

printf("\n\nModulo is: %.2f",Modulo);

}

—--------------------------------------------------------------

Ques:3:-WAP to find area of circle, rectangle and triangle.

Ans:-

Area of circle:-

#include<stdio.h>

main()

{

float r;

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

scanf("%f",&r);

printf("\nThe area of circle is %d",3.14\*r\*r);

}

Area of rectangle:-

#include<stdio.h>

main()

{

int length,bredth;

printf("Enter the length:");

scanf("%d",&length);

printf("\nEnter the bredth:");

scanf("%d",&bredth);

printf("\nArea of rectangle %d",length\*bredth);

}

Area of triangle:-

#include<stdio.h>

main()

{

float base,height;

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

scanf("%f",&base);

printf("\nEnter the value of height:");

scanf("%f",&height);

printf("\nThe area of triangle is %f",(base\*height)/2);

}

—--------------------------------------------------------------

Ques:4:-WAP to find simple interest.

Ans:-

#include<stdio.h>

main()

{

float principle,rate,time;

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

scanf("%f",&principle);

printf("\nEnter the value of rate :");

scanf("%f",&rate);

printf("\nEnter the value of time :");

scanf("%f",&time);

printf("\nTotal of simple interest %f",(principle\*rate\*time)/100);

}

—--------------------------------------------------------------

Ques:5:-WAP to check if the given year is a leap year or not.

Ans:-

#include<stdio.h>

main()

{

int year;

printf("Enter the year:");

scanf("%d",&year);

if(year%4==0){

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

}else{

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

}

}

—--------------------------------------------------------------

Ques:6:-WAP to convert years into days and days into years.

Ans:-

Days to year

#include<stdio.h>

void main()

{

int days, years;

printf("Enter the days:");

scanf("%d",&days);

years= days / 365;

printf("\n Number of years is : %d",years);

}

Year to days:-

#include <stdio.h>

void main()

{

int ndays, year,days;

printf("Enter the year:");

scanf("%d", &year);

days=year\*365;

printf ("days=%d",days);

}

—--------------------------------------------------------------

Ques:7:-WAP to make simple calculator (operation include Addition, Subtraction,

Multiplication, Division, modulo).

Ans:-

#include<stdio.h>

main()

{

char operator;

printf("Enter the operator:");

scanf("%c",&operator);

switch(operator){

case '+':

printf("Addition");

break;

case '-':

printf("Subtraction");

break;

case '\*':

printf("Multiply");

break;

case '/':

printf("Divide");

break;

case '%':

printf("Modulo");

break;

}

}

—--------------------------------------------------------------

Ques:8:-WAP to swap two numbers without using third variable.

Ans:-

#include<stdio.h>

main()

{

int a,b;

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

scanf("%d",&a);

printf("\nEnter the value of b :");

scanf("%d",&b);

printf("\nBefore swap a %d and 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 and b %d",a,b);

}

—--------------------------------------------------------------

Ques:9:-WAP to find number is even or odd using ternary operator.

Ans:-

#include<stdio.h>

main()

{

int num;

printf("Enter the value of even number :");

scanf("%d",&num);

if(num%2==0){

printf("The value is even");

}else{

printf("The value is odd");

}

}

—--------------------------------------------------------------

Ques:10:-WAP to show

1. Monday to Sunday using switch case

2. Vowel or Consonant using switch case.

Ans:-

MOnday to Sunday:--

#include<stdio.h>

void main()

{

int day;

printf("Enter the days:");

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");

}

}

Vowel and Consonant:--

#include<stdio.h>

void main()

{

char alphabet;

printf("Enter the alphabet:");

scanf("%c",&alphabet);

switch(alphabet){

case 'a':

printf("vowel");

break;

case 'e':

printf("vowel");

break;

case 'i':

printf("vowel");

break;

case 'o':

printf("vowel");

break;

case 'u':

printf("vowel");

break;

default:

printf("Consonant");

}

}

Looping

---------------------------------------------------------------

Ques:11:-WAP to take 10 no. Input from user and find out …

Ans:-

#include<stdio.h>

void main()

{

int i;

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

{

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

}

}

—--------------------------------------------------------------

Ques:12:-How many Even numbers are there.

Ans:-

#include<stdio.h>

main()

{

int i;

for(i=2;i<=10;i=i+2){

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

}

}

—--------------------------------------------------------------

Ques:13:-How many odd numbers are there.

Ans:-

#include<stdio.h>

main()

{

int i;

for(i=1;i<=10;i=i+2){

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

}

}

—-----------------------------------------------------------

Ques:14:-Sum of odd numbers WAP to print table up to given numbers .

Ans:-

#include <stdio.h>

main()

{

int i, n, sum=0;

printf("Enter upper limit: ");

scanf("%d", &n);

for(i=1; i<=n; i=i+2)

{

sum =sum+i;

}

printf("Sum of odd numbers = %d", sum);

}

—--------------------------------------------------------------

Ques:15:-WAP to print factorial of given number.

Ans:-

#include<stdio.h>

void main()

{

int i,n,factorial = 1;

printf("Enter the number:");

scanf("\n%d",&n);

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

{

factorial=factorial \* i;

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

}

}

—--------------------------------------------------------------

Ques:16:-WAP to print Fibonacci series up to given numbers.

Ans:-

#include<stdio.h>

main()

{

int i=1,num;

int ft=0,st=1;

printf("Enter the number:"); //user input

scanf("%d",&num);

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

{

int tt = ft + st;

printf("%d",ft);

ft = st;

st = tt;

tt++;

}

}

—-----------------------------------------------------------

Ques:17:-WAP to print number in reverse order e.g.: number = 64728 ---> reverse = 82746 .

Ans:-

#include <stdio.h>

main()

{

int n, reverse = 0, remainder;

printf("Enter the number:");

scanf("%d", &n);

while (n != 0) {

remainder = n % 10; // 45%10=5;

reverse = reverse \* 10 + remainder; // 0\*10+5=5;

n =n / 10; //45/10;

}

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

}

—--------------------------------------------------------------

Ques:18:-Write a program to find out the max from given number (E.g., No: -1562

Max number is 6).

Ans:- #include<stdio.h>

main()

{

int a[5],i,max=0,min=0;

printf("Enter Five Value :");

for(i=0;i<=4;i++)

{

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

}

for(i=0;i<=4;i++)

{

if(a[i]>max)

{

max=a[i];

}

else

{

min=a[i];

}

}

printf("Minium is : %d\n",min);

printf("Maximum is : %d\n",max);

}

—--------------------------------------------------------------

Ques:19:-Write a program make a summation of given number (E.g., 1523 Ans: -11).

Ans:-

#include<stdio.h>

void main()

{

int i,n,sum=0;

printf("Enter the number:");

scanf("\n%d",&n);

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

{

sum=sum + i;

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

}

}

—--------------------------------------------------------------

Ques:20:-Write a program you have to make a summation of first and last Digit. (E.g.,

1234 Ans: -5).

Ans:-

#include <stdio.h>

main()

{

int n, sum=0, firstDigit, lastDigit;

printf("Enter number to find sum of first and last digit = ");

scanf("%d", &n);

lastDigit = n % 10;

firstDigit =n;

while(n >= 10)

{

n = n / 10;

}

firstDigit = n;

sum = firstDigit + lastDigit;

printf("Sum of first and last digit = %d", sum);

}

—------------------------------------------------------------

Ques:21:-

1

1 0

1 0 1

1 0 1 0

1 0 1 0 1

Ans:-

#include<stdio.h>

main()

{

int i,j,n,a;

printf("Enter the number:");

scanf("%d",&n);

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

if(i%2!=0)a=1;

else a=0;

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

printf(" %d" ,a);

if(a==0) a=1;

else a=0;

}

printf("\n");

}

}

—-----------------------------------------------------------------------------------------------------------------------------

Ques:22:-

A

B C

D E F

G H I J

K L M N O

Ans:-

#include<stdio.h>

main(){

int i,j,n;

int k=65;

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

scanf("%d",&n);

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

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

printf(" %c ", k );

k++;

}

printf("\n");

}

}

—--------------------------------------------------------------

Ques:23:-

\*

\* \* \*

\* \* \* \* \*

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

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

Ans:-

#include <stdio.h>

int main()

{

int i, j, k;

for(i=1;i<=5;i++)

{

for(j=i;j<5;j++)

{

printf(" ");

}

for(k=1;k<(i\*2);k++)

{

printf("\*");

}

printf("\n");

}

}

—--------------------------------------------------------------

Ques:24:-

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

Ans:-

#include<stdio.h>

int main()

{

int n, i, j, c = 1;

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

scanf("%d",&n);

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

{

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

{

printf("%d ", c);

++c;

}

printf("\n");

}

return 0;

}

—--------------------------------------------------------------

Ques:25:-

A

A B

A B C

A B C D

A B C D E

Ans:-

#include<stdio.h>

main(){

int i,j,n;

int k=65;

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

scanf("%d",&n);

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

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

printf("%c", 'A' + j-1);

k++;

}

printf("\n");

}

}

—--------------------------------------------------------------

Ques:26:-

\*

\* \*

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\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

Ans:-

#include <stdio.h>

int main() {

// right pasal triangle

int size = 5;

for (int i = 1; i <= size; i++) {

for (int j = 0; j < i; j++) {

printf("\*");

}

printf("\n");

}

for (int i = 1; i <= size-1; i++) {

for (int j = 0; j < size-i; j++) {

printf("\*");

}

printf("\n");

}

return 0;

}

—--------------------------------------------------------------

Ques:27:-Write a program to find out the max number from given array using function.

Ans:-

#include <stdio.h>

max(int [],int k);

void main()

{

int a[]={10,5,45,12,19};

int n=5,m;

m=max(a,n);

printf("\nMAXIMUM NUMBER IS %d",m);

}

max(int x[],int k)

{

int t,i;

t=x[0];

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

{

if(x[i]>t)

t=x[i];

}

return(t);

}

—--------------------------------------------------------------

Ques:28:-WAP of Addition, Subtraction, Multiplication and Division using Switch

case.(Must Be Menu Driven) .

Ans:-

#include<stdio.h>

main()

{

int a,b;

int num;

printf("Enter the values of a & b: ");

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

printf("Enter your Choice : ");

scanf("%d",&num);

switch(num)

{

case 1 :

printf("Sum of %d and %d is : %d",a,b,a+b);

break;

case 2 :

printf("Difference of %d and %d is : %d",a,b,a-b);

break;

case 3 :

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

break;

case 4 :

printf("Division of Two Numbers is %d : ",a/b);

break;

default :

printf(" Enter Your Correct Choice.");

}

}

—--------------------------------------------------------------

Ques:29:-WAP to find reverse of string using recursion.

Ans:-

#include <stdio.h>

void reverse(char \*str)

{

if (\*str)

{

reverse(str + 1);

printf("%c", \*str);

}

}

main()

{

char a[] = "Abhi";

reverse(a);

}

—--------------------------------------------------------------

Ques:30:-WAP to find factorial using recursion.

Ans:-

#include<stdio.h>

int getfactorial(int i)

{

if(i>1)

{

return i\*getfactorial(i-1);

}

}

main()

{

printf("Factorial=%d",getfactorial(5));

}

—-------------------------------------------------------------

Ques:31:-WAP to take two Array input from user and sort them in ascending or

descending order as per user’s choice.

Ans:-

#include<stdio.h>

int main()

{

int a[6];

int temp;

int i, j;

for(i=0;i<6;i++){

printf("Enter the elements:");

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

}

printf("Before Sorting:");

for(i=0; i<6; i++)

{

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

}

for(i=0; i<6; i++)

{

for(j=i+1; j<6; j++) {

if(a[i]>a[j]){

temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

printf("\nAfter Sorting:");

for(i=0; i<6; i++)

{

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

}

return 0;

}

—--------------------------------------------------------------

Ques:32:-WAP to make addition, Subtraction and multiplication of two matrix using

2-D Array.

Ans:-#include<stdio.h>

main()

{

int a[3][3]={3,5,6,5,4,3,2,1,2};

int b[3][3]={5,3,5,7,4,4,4,9,8};

int c[3][3];

int i,j;

printf("------Enter the first matrix:-----\n");

for(i=0;i<3;i++){

for(j=0;j<3;j++){

printf(" %d ",a[i][j]);

}

printf("\n");

}

printf("------Enter the Second matrix:-----\n");

for(i=0;i<3;i++){

for(j=0;j<3;j++){

printf(" %d ",b[i][j]);

}

printf("\n");

}

printf("------Enter the Addition matrix:------\n");

for(i=0;i<3;i++){

for(j=0;j<3;j++){

c[i][j]=a[i][j]+b[i][j];

printf(" %d ",c[i][j]);

}

printf("\n");

}

}

ii:->#include<stdio.h>

main()

{

int a[3][3]={3,5,6,5,4,3,2,1,2};

int b[3][3]={5,3,5,7,4,4,4,9,8};

int c[3][3];

int i,j;

printf("------Enter the first matrix:-----\n");

for(i=0;i<3;i++){

for(j=0;j<3;j++){

printf(" %d ",a[i][j]);

}

printf("\n");

}

printf("------Enter the Second matrix:-----\n");

for(i=0;i<3;i++){

for(j=0;j<3;j++){

printf(" %d ",b[i][j]);

}

printf("\n");

}

printf("------Enter the Subtraction matrix:------\n");

for(i=0;i<3;i++){

for(j=0;j<3;j++){

c[i][j]=a[i][j]-b[i][j];

printf(" %d ",c[i][j]);

}

printf("\n");

}

}

iii:->#include<stdio.h>

main()

{

int a[3][3]={3,5,6,5,4,3,2,1,2};

int b[3][3]={5,3,5,7,4,4,4,9,8};

int c[3][3];

int i,j;

printf("------Enter the first matrix:-----\n");

for(i=0;i<3;i++){

for(j=0;j<3;j++){

printf(" %d ",a[i][j]);

}

printf("\n");

}

printf("------Enter the Second matrix:-----\n");

for(i=0;i<3;i++){

for(j=0;j<3;j++){

printf(" %d ",b[i][j]);

}

printf("\n");

}

printf("------Enter the multiplication matrix:------\n");

for(i=0;i<3;i++){

for(j=0;j<3;j++){

c[i][j]=a[i][j]\*b[i][j];

printf(" %d ",c[i][j]);

}

printf("\n");

}

}

—--------------------------------------------------------------

Ques:33:-WAP Find out length of string without using inbuilt function.

Ans:-

#include<stdio.h>

#include<string.h>

main()

{

char name[20];

printf("Enter your name:");

gets(name);

printf("\nName=%s",name);

printf("\nLength=%d",strlen(name));

}

—--------------------------------------------------------------

Ques:34:-WAP to reverse a string and check that the string is palindrome or not.

Ans:-

#include<stdio.h>

#include<string.h>

main()

{

char s1[20],s2[20];

printf("Enter s1:");

gets(s1);

strcpy(s2,s1);

strrev(s2);

if(!strcmp(s1,s2))

{

printf("String is Palindrome");

}else

{

printf("String is not Palindrome");

}

}

—--------------------------------------------------------------

Ques:35:-Write a program of structure employee that provides the following

information -print and display empno, empname, address and age.

Ans:-#include <stdio.h>

#include <stdlib.h>

typedef struct{

char name[30];

int id;

double salary;

} Employee;

int main()

{

int n=1;

int i;

Employee employees[n];

printf("Enter %d Employee Details \n \n",n);

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

printf("Employee %d:- \n",i+1);

printf("Name: ");

scanf("%[^\n]s",employees[i].name);

printf("Id: ");

scanf("%d",&employees[i].id);

printf("Salary: ");

scanf("%lf",&employees[i].salary);

char ch = getchar();

printf("\n");

}

printf("-------------- All Employees Details ---------------\n");

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

printf("Name \t: ");

printf("%s \n",employees[i].name);

printf("Id \t: ");

printf("%d \n",employees[i].id);

printf("Salary \t: ");

printf("%.2lf \n",employees[i].salary);

printf("\n");

}

}

—--------------------------------------------------------------

Ques:36:-Write a program of structure for five employee that provides the following

information -print and display empno, empname, address and age.

Ans:-#include <stdio.h>

#include <stdlib.h>

typedef struct{

char name[30];

int id;

double salary;

} Employee;

main()

{

int n=5;

int i;

Employee employees[n];

printf("Enter %d Employee Details \n \n",n);

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

printf("Employee %d:- \n",i+1);

printf("Name: ");

scanf("%[^\n]s",employees[i].name);

printf("Id: ");

scanf("%d",&employees[i].id);

printf("Salary: ");

scanf("%lf",&employees[i].salary);

char ch = getchar();

printf("\n");

}

printf("-------------- All Employees Details ---------------\n");

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

printf("Name \t: ");

printf("%s \n",employees[i].name);

printf("Id \t: ");

printf("%d \n",employees[i].id);

printf("Salary \t: ");

printf("%.2lf \n",employees[i].salary);

printf("\n");

}

}

—--------------------------------------------------------------

Ques:37:-WAP to show difference between Structure and Union.

Ans:-

#include <stdio.h>

union job //defining a union

{

char name[32];

float salary;

int worker\_no;

}u;

struct job1 //defining a structure

{

char name[32];

float salary;

int worker\_no;

}s;

main()

{

printf("size of union = %d",sizeof(u));

printf("\nsize of structure = %d", sizeof(s));

}

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