**Assignment 1**

Prog 1:

Code:

#include <stdio.h>

int main()

{

int a,b,c,d;

a=sizeof(int);

b=sizeof(float);

c=sizeof(double);

d=sizeof(char);

printf("\n the size of int is = %d",a);

printf("\n the size of float is = %d",b);

printf("\n the size of double is = %d",c);

printf("\n the size of char is = %d",d);

return 0;

}

Output:

the size of int is = 4

 the size of float is = 4

 the size of double is = 8

 the size of char is = 1

**...Program finished with exit code 0**

**Press ENTER to exit console.**

Prog2:

Code:

#include <stdio.h>

void swap(int \*a,int \*b);

int main()

{

int a,b;

printf("enter the first no");

scanf("%d",&a);

printf("enter the second no");

scanf("%d",&b);

swap(&a,&b);

printf("the swapped numbers are %d and %d",a,b);

return 0;

}

void swap(int \*a,int \*b)

{

int temp;

temp=\*a;

\*a=\*b;

\*b=temp;

}

Output:

enter the first no23

enter the second no34

the swapped numbers are 34 and 23

**...Program finished with exit code 0**

**Press ENTER to exit console.**

Prog 3:

Code:

#include <stdio.h>

int check(char ch);

int main()

{

char ch;

printf("enter the alphabet");

scanf("%c",&ch);

int b;

b=check(ch);

if(b==1)

{

printf("\n the alphabet is a vowel");

}

else

{

printf("\n the alphabet is a consnant");

}

return 0;

}

int check(char ch)

{

int a=0;

if(ch=='a'|| ch=='A'|| ch=='e' || ch=='E' || ch=='i' || ch=='I'|| ch=='o'|| ch=='O'|| ch=='u'|| ch=='U')

{

a=1;

}

else

{

a=0;

}

return a;

}

Output:

enter the alphabeta

 the alphabet is a vowel

**...Program finished with exit code 0**

**Press ENTER to exit console.**

Prog 4:

Code:

#include <stdio.h>

#include <math.h>

float root1(float a,float b,float d);

float root2(float a,float b,float d);

int main()

{

int a,b,c;

printf("enter the coeficient of x^2");

scanf("%d",&a);

printf("enter the coeficient of x");

scanf("%d",&b);

printf("enter the coeficient of x^0");

scanf("%d",&c);

float d,p,e;

p=pow(b,2);

e=4\*a\*c;

d=p-e;

if(d<0.00)

{

printf("\n error: the roots does not exist");

}

else

{

float r1,r2;

r1=root1(a,b,d);

r2=root2(a,b,d);

printf("the roots of a quadratric equation are %f and %f",r1,r2);

}

return 0;

}

float root1(float a,float b,float d)

{

float c,e,f;

c=sqrt(d);

e=0.00-b;

f=(e+c)/(2\*a);

return f;

}

float root2(float a,float b,float d)

{

float c,e,g;

c=sqrt(d);

e=0.00-b;

g=(e-c)/(2\*a);

return g;

}

Output:

enter the coeficient of x^22

enter the coeficient of x6

enter the coeficient of x^04

the roots of a quadratric equation are -1.000000 and -2.000000

**...Program finished with exit code 0**

**Press ENTER to exit console.**

Prog 5:

Code:

#include <stdio.h>

int checkalpha(char ch);

int main()

{

char ch;

printf("enter character");

scanf("%c",&ch);

int d;

d=checkalpha(ch);

if(d==1)

{

printf("\n It is a alphabet");

}

else

{

printf(" \n It is not an alphabet");

}

return 0;

}

int checkalpha(char ch)

{

int a=0;

if(ch>='A' && ch<='Z')

{

a=1;

}

else if(ch>='a' && ch<='z')

{

a=1;

}

else

{

a=0;

}

return a;

}

Output:

enter characterH

 It is a alphabet

**...Program finished with exit code 0**

**Press ENTER to exit console.**

Prog 6:

Code:

void fibonacci(int n);

int main()

{

int n;

printf("enter the limit of the series");

scanf("%d",&n);

printf("\n The fiboncci series");

fibonacci(n);

return 0;

}

void fibonacci(int n)

{

int a,b,c;

a=0;

b=1;

c=1;

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

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

int i=0;

while(i<n-2)

{

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

a=b;

b=c;

c=a+b;

i++;

}

}

Output:

enter the limit of the series5

 The fiboncci series

 0

 1

 1

 2

 3

**...Program finished with exit code 0**

**Press ENTER to exit console.**

Prog 7:

Code:

#include <stdio.h>

int main()

{

char ch='A';

int i;

printf("\n the alphabets from A ton Z are");

for(i=0;i<26;i++)

{

char c=ch+i;

printf("\n %c",c);

}

return 0;

}

Output:

 the alphabets from A ton Z are

 A

 B

 C

 D

 E

 F

 G

 H

 I

 J

 K

 L

 M

 N

 O

 P

 Q

 R

 S

 T

 U

 V

 W

 X

 Y

 Z

**...Program finished with exit code 0**

**Press ENTER to exit console.**

Prog 8:

Code:

#include <stdio.h>

int main()

{

int n,r,d=0,b;

printf("enter a number");

scanf("%d",&n);

r=n;

while(r>0)

{

b=r%10;

d=d\*10+b;

r=r/10;

}

if(n==d)

{

printf("it is a palindrome");

}

else

{

printf("it is not a palindrome");

}

return 0;

}

Output:

enter a number343

it is a palindrome

**...Program finished with exit code 0**

**Press ENTER to exit console.**

Prog 9:

Code:

#include <stdio.h>

int main()

{

int a,b,c;

int e;

printf("enter the first number");

scanf("%d",&a);

printf("enter the second number");

scanf("%d",&b);

printf("enter the operation");

scanf("%d",&e);

switch(e)

{

case 1:c=a+b;

printf("the sum is %d",c);

break;

case 2:c=a-b;

printf("the difference is %d",c);

break;

case 3:c=a\*b;

printf("the product is %d",c);

break;

case 4:c=a/b;

printf("\n the qoutient is %d",c);

int d;

d=a%b;

printf("\n the remainder is %d",d);

break;

default:printf("the invalid entry");

}

return 0;

}

Output:

enter the first  number2

enter the second  number3

enter the operation1

the sum is 5

Prog 10:

Code:

#include <stdio.h>

void reverse(char str[],int si, int ei);

int main()

{

char str[20];

printf("enter the word");

gets(str);

int i;

int s=0;

for(i=0;str[i]!='\0';i++)

{

s++;

}

int si=0;

int ei;

ei=s-1;

reverse(str,si,ei);

printf("the reverse of a string is");

printf(" ");

puts(str);

return 0;

}

void reverse(char str[],int si, int ei)

{

if(si>=ei)

{

return;

}

char temp;

temp=str[si];

str[si]=str[ei];

str[ei]=temp;

reverse(str,si+1,ei-1);

return;

}

Output:

enter the word shaina

the reverse of a string is aniahs

**...Program finished with exit code 0**

**Press ENTER to exit console.**