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S.no	Typecast function	Description
1	atof()	Converts string to float
2	atoi()	Converts string to int
3	atol()	Converts string to long
4	itoa()	Converts int to string
5	ltoa()	Converts long to string

Exericse 2

q-1

```c
#include <stdio.h>
#include <math.h>


int main()
{     float a,b,c,D,root_1,root_2;
      printf("enter the coeffecients of aX^2+bX+c \n");
      scanf("%f %f %f", &a,&b,&c);
      D=sqrt(b*b-4*a*c);
      root_1=(-1+D)/(2*b);
      root_2=(-1-D)/(2*b);
      printf("the roots are %0.2f and %0.2f",root_1,root_2);

      return 0;
}
```

```
enter the coeffecients of aX^2+bX+c
1
1
-6
```

q-2

```c
#include <stdio.h>

int main()
{
    printf("line1 ");
    printf("line2 ");
    printf("line3 \n\n");
    printf("line1 \n");
    printf("line2 \n");
    printf("line3 \n\n");
    printf("line1 \b");
    printf("line2 \b");
    printf("line3 \b\n\n");
    printf("line1 \t");
    printf("line2 \t");
    printf("line3 \t");
    return 0;
```

```
}
```

```
Select C:\Users\Aditya Sehgal\Desktop\Untitled1.exe
line1 line2 line3

line1
line2
line3

line1line2line3

line1   line2   line3
--------------------------------
Process exited after 0.02596 seconds with return value 0
```

q-3 (a)

```c
#include <stdio.h>

int main()
{
    float a, b;
    printf("ENTER a: ");
    scanf("%f", &a);
    printf("ENTER b: ");
    scanf("%f", &b);
    printf("ANSWER: %0.2f", a += b);
    return 0;
}
```

```
ENTER a: 1
ENTER b: 2
ANSWER: 3.00
PS C:\Users\Aditya Sehgal\Desktop>
```

(b)

```c
#include <stdio.h>

int main()
{
    float a, b;
    printf("ENTER a: ");
    scanf("%f", &a);
    printf("ENTER b: ");
    scanf("%f", &b);
    printf("ANSWER: %.2f", a -= b);
    return 0;
}
```

```
ENTER a: 4
ENTER b: 2
ANSWER: 2.00
```

q-4

```c
#include <stdio.h>

int main()
{
    int i,j,k,l;
    i=l=1;
    j=i++;
    k=++l;
    printf("answer by ++i is %d and by i++ is %d",k,j);

     return 0;
}
```

```
answer by ++i is 2 and by i++ is 1
PS C:\Users\Aditya Sehgal\Desktop>
```

q-5

```c
#include <stdio.h>

int main()
{
    int a,b,c;
    printf("enter the values you want switched\n");
    scanf("%d%d",&a,&b);
    c=a;
    a=b;
    b=c;
    printf("values after switching are %d and %d",a,b);
     return 0;
}
```

```
enter the values you want switched
1
5
values after switching are 5 and 1
```

q-6

```c
#include <stdio.h>


int main()
{
    char a;
    printf("ENTER NUMBER: ");
    scanf("%d", &a);
```

```
    printf("NUMBER AFTER LEFT SHIFT: %d \n", a << 1);
    printf("NUMBER AFTER RIGHT SHIFT: %d", a >> 1);
    return 0;
}
```

```
ENTER NUMBER: 2
NUMBER AFTER LEFT SHIFT: 4
NUMBER AFTER RIGHT SHIFT: 1
```

q-7

```
#include <stdio.h>

int main()
{
    int a, b, c;
    printf("enter 2 values\n");
    scanf("%d%d", &a, &b);

    c = (a < b) ? a : b;

    printf("%d is the smaller value", c);
    return 0;
}
```

```
enter 2 values
3
2
2 is the smaller value
```

q-8

```
#include <stdio.h>

int main()
{
    int a;
    printf("ENTER THE NUMBER: ");
    scanf("%d", &a);
    printf("Size of variable a: %d\n", sizeof(a));
    printf("Size of int: %d\n", sizeof(int));
    printf("Size of char: %d\n", sizeof(char));
    printf("Size of float: %d\n", sizeof(float));
    printf("Size of double: %d\n", sizeof(double));
    printf("Size of long int: %d", sizeof(long));
    return 0;
}
```

```
ENTER THE NUMBER: 2
Size of variable a: 4
Size of int: 4
Size of char: 1
Size of float: 4
Size of double: 8
Size of long int: 8
```

q-9

```c
#include <stdio.h>

int main()
{
    int a,b;
    printf("enter the 2 values\n");
    scanf("%d%d",&a,&b);
    float c;
    c=(double) (a+b)/2;
    printf("the mean is %0.2f",c);
     return 0;
}
```

```
enter the 2 values
3
8
the mean is 5.50
```

q-10

```c
#include <stdio.h>

#include <stdlib.h>
#include <string.h>

int main()
{

    char x[20] = "1.234";
    float y = atof(x);
    printf("Value of x = %f\n", y);
    char ar[10] = "120";
    int br = atoi(ar);
    printf("Value = %d\n", br);

    char ad[20] = "100000000";
    long sd = atol(ad);
    printf("Value = %ld\n", sd);

    int re = 54325;
    char tr[20];
    itoa(re, tr, 2);
    printf("Binary value = %s\n", tr);

    itoa(re, tr, 10);
    printf("Decimal value = %s\n", tr);
```

```
    itoa(re, tr, 16);
    printf("Hexadecimal value = %s\n", tr);

    long a = 1000;
    char b[50];
    ltoa(a, b, 2);
    printf("Binary value = %s\n", b);

    ltoa(a, b, 10);
    printf("Decimal value = %s\n", b);

    ltoa(a, b, 16);
    printf("Hexadecimal value = %s\n", b);
    return 0;
}
```

```
Value of x = 1.234000
Value = 120
Value = 100000000
Binary value = 1101010000110101
Decimal value = 54325
Hexadecimal value = d435
Binary value = 1111101000
Decimal value = 1000
Hexadecimal value = 3e8
```