``cpp
char name[]="CoMPutER";
(or char
*name="CoMPutER";)
for (int
x=0;x<strlen(name);x++)
  if (islower(name[x]))
 	
name[x]=toupper(name[x])
;
    else
    if(isupper(name[x]))
     if(x%2==0)
 	
name[x]=tolower(name[x]);
      else
      name[x]=name[x-1];
cout<<name;
``
	``cpp
	char name[]="IntRAneT";
	(or char
	*name="IntRAneT";)
	for (int
	x=0;x<strlen(name);x++)
	  if (islower(name[x]))
	
	name[x]=toupper(name[x])
	;
	      else
	      if(isupper(name[x]))
	      if(x%2==0)
	
	name[x]=tolower(name[x]);
	      else
	      name[x]=name[x-1];
	cout<<name;
	``
		``cpp
		char name[]="a
		ProFiLe";
		(or char *name)
		for (int
		x=0;x<strlen(name);x+
		+)
		        if
		(islower(name[x]))
		
		name[x]=toupper(name[
		x]);
		        else
		
		if(isupper(name[x]))
		        if(x%2!=0)
		
		name[x]=tolower(name[
		x-1]);
		        else
		        name[x]--;
		cout<<name;
		``

``cpp
void exec(int &b,int c=200)
{
int temp=b+c;
b+-temp;
if(c==200)
 	
cout<<temp<<b<<c<<en
dl;
}
 	
void main()
{
int m=50,n=20;
exec(n);
cout<<m<<n<<endl;
exec(m,n);
cout<<m<<n<<endl;
}
``
	``cpp
	int fun(int &x,int y=10)
	{
	if(x%y==0) return ++x ;
	else
	 return y--;
	}
	void main()
	{
	int p=20,q=23;
	q=fun(p,q);
	cout<<p<<q<<endl;
	p=fun(q);
	cout<<p<<q<<endl;
	q=fun(p);
	cout<<p<<q<<endl;
	}
	``
		``cpp
		int g=20;
		void fun(int &x,int y)
		{
		x=x-y;
		y=x*10;
		cout<<x<<","<<y<<'\
		n';
		}
		void main()
		{
		int g=7;
		fun(g,::g);
		cout<<g<<","<<::g<<'
		\n';
		fun(::g,g);
		cout<<g<<","<<::g<<'
		\n';
		}
		``

``cpp
int max(int &x, int &y, int
&z)
{
if(x>y&&y>z)
 { y++;z++;return x;
}
else
if(y>z)
    return y;
else
    return z;
}
void main()
{int a=10,b=13,c=8;
``
	``cpp
	int &max(int &x, int &y, int
	&z)
	{
	if(x>y&&y>z)
	 { y++;z++;return x;
	}
	else
	if(y>z)
	    return y;
	else
	    return z;
	}
	void main()
	{int a=10,b=13,c=8;
	``
		``cpp
		void print(int a)
		{ cout<<"int";}
		 void print(int *p)
		{ cout<<"int*"; }
		void print(char *a)
		{cout<<"char";}
		void print(double a)
		{cout<<"double";}
		void print(float a)
		{cout<<"float a";}
		void main()
		{print(7.9);
		print ("abc");
		print('c');
		``

| ```cpp
a=max(a,b,c);
cout<<a<<b<<c<<'\n';
b=max(a,b,c);
cout<<++a<<++b<<+
+c<<'\n';
c=max(a,b,c);
cout<<a++<<++b<<+
+c<<'\n';
}
 char *s="GOODLUCK";
for (int x=strlen(s)-
1;x>=0;x--)
{
for(int y=0;y<=x;y++)
cout<<s[y];
cout<<endl;
}
``` | ```cpp
max(a,b,c)=3;
cout<<a<<b<<c<<'\n';
b+=max(b,a,c);
cout<<++a<<++b<<+
+c<<'\n';
c=max(c,a,b);
cout<<a++<<++b<<+
+c<<'\n';
}
```<br><br>```cpp
void main()
{int array[]={2,3,4,5};
int *ar=array;
int v=*ar; cout<<v<<'\n';
v=*ar++; cout<<v<<'\n';
v=*ar; cout<<v<<'\n';
v=*++ar; cout<<v<<'\n';
}
``` | ```cpp
int a[]={5,6,7};
print(a);
print(*a);
print(7.9f);
}


char *s="ObjeCT";
int l=strlen(s);
for(int c=0;c<l;c++)
if (islower(s[c]))
s[c]=toupper(s[c]);
else
if(c%2==0) s[c]='E';
else s[c]=tolwer(s[c]);
cout<<"new
message"<<s;
``` |
| ```cpp
void print(char *p)
{
p="pass";
cout<<"value
is:"<<p<<'\n';
}
void main()
{
char *q="best of luck";
print(q);
cout<<"new value
is:"<<q;
}
``` | ```cpp
void fun(char *q)
{
strcpy(q,"change");
cout<<"\n in
function="<<q<<*q;
}
void main()
{
char *p="original";
fun(p++);
cout<<"\n in
main"<<p<<*p;
}
``` | ```cpp
void print(char **p)
{
char *s=pass;
*p=s;
cout<<"value
is:"<<*p<<'\n';
}
void main()
{char *q="best of
luck";
print(&q);
cout<<"new value
is:"<<q;
}
``` |
| ```cpp
void main()
{
int x=5,y=5;
cout<<x--;
cout<<",";
cout<< --x;
cout<<",";
cout<<y--<<","<< --y;
}
``` | ```cpp
static int l=100;
void abc()
{
static int l=8;
cout<<"first="<<l;
}
void main()
{
static int l=2;
abc();
cout<<"second="<<l<<en
cl;
}
``` | ```cpp
void main()
{
int z[3][4] =
{1,2,3,4,5,6,7,8,9,10,11,
12};
int a,b;
for(a=0;a<3;a++)
      for(b=0;b<4;++b)
              if(z[a][b]
%2==1)    z[a][b]--;
for(a=0;a<3;++a)
{      cout<<endl;
      for(b=0;b<4;b++)
      cout<<z[a]
[b]<<"\t";
}
``` |
| ```cpp
int a=3;
void demo(int x,int y, int
&z)
{
a+=x+y;
``` | ```cpp
#include<iostream.h>
int m=2;
void main()
{
int m=15;
``` | ```cpp
int area(int s)
{
return s*s;
}
float area(int b,int h)
``` |

``cpp
z=a+y;
y+=x;
cout<<x<<y<<z;
}
void main()
{
int a=2,b=5;
demo(::a,a,b);
cout<<::a<<a<<b<<endl;
demo(::a,a,b);
}
``
	``cpp
	{
	int m=10*::m;
	cout<<"m="<<m<<endl;
	cout<<"::m="<<::m<<endl;
	}
	cout<<"m="<<m<<endl;
	cout<<"::m="<<::m<<endl;
	}
	``
		``cpp
		{
		return 0.5*b*h;
		}
		void main()
		{float a;
		a=area(3);
		cout<<area(5)<<endl;
		cout<<area(4,3)<<endl;
		cout<<area(6,area(3))<<endl;
		}
		``

``cpp
class counter
{private:
unsigned int cnt;
// different cnt for
different //objects
public:
counter(){ cnt=0;}
void incnt() { cnt++;}
int getcnt() { return cnt;}
};
void main()
{
counter c1,c2;
cout<<"\
nc1="<<c1.getcnt();
cout<<"\
nc2="<<c2.getcnt();
c1.incnt();
c2.incnt();
c2.incnt();
cout<<"\
nc1="<<c1.getcnt();
cout<<"\
nc2="<<c2.getcnt();
}
``
	``cpp
	class counter
	{
	private:
	static int cnt;
	// same cnt for all objects
	public:
	void incnt() { cnt++;}
	int getcnt() { return cnt;}
	};
	counter::cnt=0;
	void main()
	{
	counter c1,c2;
	cout<<"\
	nc1="<<Tc1.getcnt();
	cout<<"\
	nc2="<<c2.getcnt();
	c1.incnt();
	c2.incnt();
	c2.incnt();
	cout<<"\
	nc1="<<c1.getcnt();
	cout<<"\
	nc2="<<c2.getcnt();
	}
	``
		``cpp
		int &max(int &x,int &y)
		{
		if(x>y)
		return x;
		else
		return y;
		}
		void main()
		{
		int a=10,b=13;
		max(a,b)= -1;
		cout<<"a="<<a<<"b="<< b;
		max(b,a)= 7;
		cout<<"a="<<a+
		+<<"b="<<b—
		     <<'\n';
		max(a,b)=3;
		cout<<"a="<<a<<"b="<<b<<endl;
		}
		``

``cpp
void main()
{
int a[]={3,5,6,7};
int *p,**q,***r,*s,*t,**s;
p=a;
s=p+1;
q=&s;
t=*q+1;
ss=&t;
r=&ss;
cout<<*p<<"\
t"<<**q<<"\t";
cout<<***r<<"\n";
}
``
	``cpp
	void main()
	{
	struct point
	{
	int x,y;
	}poly[]={{1,2},{1,4},
	{2,4},{2,2}};
	point *a;
	a=poly;
	a++;
	a->x++;
	cout<<polygon->x<<endl;
	}
	``
		``cpp
		void junk(int a, int*b)
		{
		a=a*a;
		*b=*b * *b;
		}
		void main()
		{
		int I=6,j=-4;
		junk(I,&j);
		cout<<"I="<<I<<"j="<<j;
		}
		``

``cpp
void main()
{
``
	``cpp
	#include <iostream.h>
	struct Game
	{
	``
		``cpp
		void main()
		{
		``

```
int a=32, *x=&a;
char ch=65, &cho=ch;
cho+=a;
*x+=ch;
cout<<x<<","<<y;
}
```

```
char Magic[20];int Score;
};
void main()
{
Game M={"Tiger",500};
char *Choice;
Choice=M.Magic;
Choice[4]='P';
Choice[2]='L';
M.Score+=50;
cout<<M.Magic<<M.Score<<endl;
Game N=M;
N.Magic[0]='A';N.Magic[3]='J';
N.Score-=120;
cout<<N.Magic<<N.Score<<endl;
}
```

```
char *p="Difficult";
char c;
c=++*p++;
printf("%c",c);
}
```

```
struct pixel
{int c,r;
};
void display(pixel p)
{cout<<"col"<<p.c<<"row"<<
p.r<<'\n';}
void main()
{pixel x={40,50},y,z;
z=x;  x.c+=10;
y=z;  y.c+=10;
y.r+=20;  z.c-=15;
display(x);
display(y);
display(z);
}
```

```
struct point
{int x,y;
};
void show(point p)
{cout<<"p.x<<":"<<p.y<
<endl;}
void main()
{point u={20,10},v,w;
v=u;   v.x+=20;
w=v;   u.y+=10;
u.x+=5; w.x-=5;
show(u);
show(v);
show(w);
}
```

```
void main()
{
struct s1
{char *str;
s1 *ptr;
};
s1 arr[]=
{{"parul",arr+1},
{"neha",arr+2},
{"khush",arr}};
s1 *p[3];
for(int I=0;I<3;I++)
p[I]=arr[I].ptr;
cout<<p[0]->str<<"\n";
cout<<(*p)->str<<endl;
cout<<(**p).str<<endl;
}
```

```
int sum(int a[],int size);
void main()
{
int  v[]=
{1,3,5,7,9,11,13,15,17,19};
int s1=0,s2=0;
s1=sum(v,10);
s2=sum(v+4,6);
cout<<"s1="<<s<<"\n"
<<"s2="<<s2<<'\n';
}
int sum(int b[],int size)
{
for(int I=0,s=0;I<size;I++)
s+=arr[I];
return s;
}
```

```
void change(char t[],int &c)
{
char *p=t;
int l=strlen(t);
for(;c<l-2;c+=2,p++)
{
*(p+c)=toupper(*(p+c));
}
}
void main()
{
int pos=0;
char msg[]="Pointers Fun";
change(msg,pos);
cout<<msg<<"@"<<pos;
}
```

```
void main()
{static int
a[]={0,1,2,3,4};
static int
*p[]={a,a+2,a+1,a+4,a+3};
int **ptr;
ptr=p;
cout<<**++ptr;
cout<<**ptr++;
}
```

```
void main()
{
char s[]="Pointers and
Strings";
cout<<*(&s[2])<<"\n";
cout.write(s+5,14).put("\n");
cout.write(s,20).put("\n");
cout<<*(s+3)<<"\n";
}
```

```
int calc(int u)
{
if(u%2==0)
  return u+10;
else
   return u*2;
}
void pattern(char m, int b=2)
{
for(int cnt=0;cnt<b;cnt++)
  cout<<calc(cnt)<<m;
  cout<<endl;
}
void main()
{pattern('*');
pattern('#', 4);
pattern('@',3);
}
```

```
int exec(int m)
{
if(m%3==0)
    return m*3;
else
    return m+10;
}
void output(int b=2)
{  for(int t=0;t<b;t++)
     cout<<exec(t)<<"*";
  cout<<"\n";
}
void main()
{
output(4);
output();
output(3);
}
```

```
void main()
{int I=3;
printf("%d%d%d",I+5,I-4,I);
}

void sumfn(int last)
{auto int sum=0;
static int sum2=0;
for(int I=last;I>0;I--)
sum+=I;
sum2+=sum;
cout<<sum<<" "<<sum2<<endl;
}
void main()
{
for (int I=1;I<11;I++)
sumfn(I);
}
```

```
vod main()
{
char *p= "aeiou";
char c=++*p;
cout<<c<<p<<*p;
}
==============================
void main()
{
char *p= "aeiou";
char c=*p++;
cout<<c<<p<<*p;
}
==============================
void main()
{
char *p= "aeiou";
char c=(++*p)++;
cout<<c<<p<<*p;
}
```

```
void main()
{
char *p= "aeiou";
char c=++*p++;
cout<<c<<p<<*p;
}
==============================
void main()
{
char *p= "aeiou";
char c=++(*p++);
cout<<c<<p<<*p;
}
==============================
void main()
{
char *p="Difficult";
char c;
c=++*p++;
printf("%c",c); // cout<<c;
}
```

```
#include <iostream.h>
void Changethecontent(int Arr[], int Count)
{
for (int C=1;C<Count;C++)
Arr[C-1]+=Arr[C];
}
void main()
{
int A[] ={3,4,5},B[]={10,20,30,40},C[]={900,1200};
Changethecontent(A,3);
Changethecontent(B,4);
Changethecontent(C,2);
for (int L=0;L<3;L++)
cout<<A[L]<<'#';
cout<<endl;
for (L=0;L<4;L++)
cout<<B[L] <<'#';
cout<<endl;
for (L=0;L<2;L++)
cout<<C[L] <<'#';
}
```

```cpp
class per
{
char name[20];
float sal;
public:
per(char *s,float a)
{
strcpy(name,s);sal=a;
}
per *gr(per &x)
{
if(x.sal>=sal)    return &x;
else     return this;
}
void display()
{
cout<<"name:"<<name<<'\
n'; cout<<"salary:"<<sal<<"\
n";
}
};
void main()
{per p1("reema",10000),
p2("Krishnan",20000),p3("ge
orge",5000);
per *p;
p=p1.gr(p3); p->display();
p=p2.gr(p3); p->display();
}
```

```cpp
class per
{char name[20];
float age;
public:
per(char *s,float a)
{
strcpy(name,s);age=a;
 }
per &gr(per &x)
{
if(x.age>=age)  return x;
else   return *this;
}
void display()
{
cout<<"name:"<<name<<'\
n';
cout<<"age:"<<age<<"\n";
}
};
void main()
{per p1("ramu",27.5),
p2("raju",53), p3("kalu",40);
per  p("\0",0);
p=p1.gr(p3); p.display();
p=p2.gr(p3); p.display();
}
```

```cpp
int c;
class block
{   public:
 block()
{ cout<<"\nobject created
"<<++c;}
 ~block()
{cout<<"\n object
destroyed"<<c--;}
 };
 block b1;
void  main()
{block b2;
void fun();
fun();
{   block b3;
  fun();
  }
  block b4;
}
void fun()
{block b5;
}
```

```cpp
struct subject
{  char topic[30];
   int hours;
};
void alterin(subject a)
{    strcpy(a.topic,"Motion");
     a.hours-=2;
}
void alterout(subject &a, int b)
{    strcat(a.topic,"Algebra");
     a.hours+=b;
}
void main( )
{   subject  s[3] =
    {{"Light",20},
{"Molecules",10},
{"Linear",30}};

  for(int i=0;i<3;i++)
   {   s[i].topic[i]+=2;
       s[i].hours-=2;
   }
   alterout(s[2],4);
   alterin(s[1]);
   alterout(s[0],5);
   for(i=0;i<3;i++)
   {     cout<< s[i].topic<<" requires "
         << s[i].hours<<" hours \n";
   }
}
===============================
void main ( )
{
int Track [ ] = {10, 20, 30, 40}, *Striker ;
Striker=Track :
Track [1] += 30 ;
cout<<"Striker>"<<*Striker<<end1 ;
Striker - =10 ;
Striker++ ;
cout<<"Next@"<<*Striker<<end1 ;
Striker+=2 ;
cout<<"Last@"<<*Striker<<end1 ;
cout<< "Reset To" <<Track[0] <<end1 ;
}
===============================
typedef char Txt80[80];
void main ( )
{
Char *PTexti
Txt80 Txt="Ur2GReAt";
```

```cpp
void cnvrt(char s[],int l)
{for(int c=0;c<l;c++)
{if(isupper(s[c]))
s[c]=tolower(s[c]);
elseif(if(islower(s[c]))
s[c]=toupper(s[c]);
if(isdigit(s[c]))
s[c]=s[c]+1;
else
s[c]='*';
}
}
void main()
{char t[]="CBSE Exam 2005";
int s=strlen(t);
cnvrt(t,s);
cout<<t<'\n';
for(int c=0,r=s-1;c<=s/2;c++,r--)
{
char temp=t[c];
t[c]=t[r];
t[r]=temp;
}
cout<<text<<endl;
}
===========================
class TRAIN
{
int Tno, TripNo, PersonCounti
public:
TRAIN(int Tmno=l)
 {Tno=Tmno;TripNo=O;
PersonCount=O;}
void Trip(int TC=100)
 {TripNo++;PersonCount+=TC;}
voidShow()
{cout<<Tno<<":"<<TripNo<<":"
<<PersonCount<<endl;}
};
void main ( )
{TRAIN T(10) ,N;
N. Trip ();
T . Show ();
T.Trip(70);
N.Trip(40);
N. Show ();
T . Show ();
}
```

```cpp
void main( )
{   char a[ ]="MinD2CHaT";
 for (int i=0;a[i]!='\0';i++)
{    char ch=
a[i]>='a'&&a[i]<='j' ?
          a[i]-32 : a[i]+1;
     if(isupper(ch))
a[i]=tolower(ch);
     else
if(isdigit(ch))
       a[i]*=2;
     else
a[i]=toupper(ch);
  cout<<ch;
  }
  cout<<"\nChanged String = "<<a;
}
```