```cpp
#include<bits/stdc++.h>
using namespace std;

int main(){
   int a=5,b=567;
   int *p;
   cout<<p<<endl;      //Points to Garbage Value(Address) Here ->   0x401a9b
   int *q=0;
   cout<<q<<endl;      // 0
   p=0;
   cout<<p<<endl;      // 0
   q=&a;
   cout<<q<<" And The Value is "<< *q <<endl;     //0x61ff00 And The Value is 5
   int *w;
   w=&b;
   cout<<w<<" here Value is *w = "<<*w<<endl;      // 0x61fefc here Value is *w = 567
   cout<<((*w)++)<<endl;                  // 567
   cout<<(++(*w))<<endl;                  //569
   //cout<<(++(*w)++)<<endl;   Compilation Error
   //Copy Pointer To Pointer
   int *t=w;
   cout<<"w= "<<w<<" *w Value = "<<*w<<" And t= "<<t<<" *t Value = "<<*t<<endl;
   //w= 0x61fee8 *w Value = 569 And t= 0x61fee8 *t Value = 569
   return 0;
}
```

```cpp
#include<bits/stdc++.h>
using namespace std;

int main(){
    /*
    int i=9;
    int *r=&i;
    *r=*r+1;
    cout<<i<<endl;    //10
    *r+=1;
    cout<<*r<<endl;   //11
    cout<<r<<endl;
    r+=1;
    cout<<r<<endl;
    r=r+1;
    cout<<r<<endl;
    */
    //  0x61ff08
    //  0x61ff0c
    //  0x61ff10
```

```
    // double *g =&i;     Error "a value of type \"int *\" cannot be used to
initialize an entity of type\"double
    double e=45.836;
    double *v=&e;
    cout<<v<<endl;
    v+=1;
    cout<<v<<endl;
    // 0x61ff00
    // 0x61ff08
    return 0;
}
```

```
#include<bits/stdc++.h>
using namespace std;

int main(){
    int arr[10]={11,22,33,44,55,66,77,88,99,1010};
    cout<<"Size Of arr = "<<sizeof(arr)<<endl;
    //    Size Of arr = 40
    cout<<"First Block Address "<<arr<<" And Value is "<<*arr<<endl;
    cout<<"Fourth Block Address "<<(arr+3)<<" And Value is "<<*(arr+3)<<endl;
    // First Block Address 0x61fed8 And Value is 11
    // Fourth Block Address 0x61fee4 And Value is 44
    *arr-=10;
    cout<<"First Block Address "<<arr<<" And Value is "<<*arr<<endl;
    // First Block Address 0x61fed8 And Value is 1

    cout<<" The Value of arr[5] ="<<arr[5]<<" Same as The Value of *(arr+5)= "<<
*(arr+5)<<endl;
    cout<<" The Value of 5[arr] ="<<5[arr]<<" Same as The Value of *(5+arr)= "<<
*(5+arr)<<endl;
    cout<<"The Value Of 9th Block (9-1)[arr] ="<<(9-1)[arr]<<endl;
    //  The Value of arr[5] =66 Same as The Value of *(arr+5)= 66
    //  The Value of 5[arr] =66 Same as The Value of *(5+arr)= 66
    //  The Value Of 9th Block (9-1)[arr] =99

    int *u=arr;
    //  int *t=arr[0];// Error
    int *y=&arr[0];
    cout<<"Size of y = "<<sizeof(y)<<endl;
    cout<<"The Value of u= "<<u<<" The Value of y = "<<y<<endl;
        //    Size of y = 4
        //    The Value of u= 0x61fed0 The Value of y = 0x61fed0


    return 0;
}
```

```cpp
#include<bits/stdc++.h>
using namespace std;

int main(){
    // For Arrays
    // int arr[4]={1,2,3,4};
    // int arr2[5];
    // //arr2={2,4,5,6,7};  // Errror
    // //arr2[5]={5,6,4,4,4};  //error
    // cout<<r<<endl;  //0x61fef4
    // char cha[7]="siddhi";
    // cout<<cha[4]<<endl;
    //  cha="siddhi";   // Error
    //  char cha3[7];
     // Not Initialize Produce GARBAGE Value
    //  cha3[7]="siddhi";  Error //ok
    //  char cha3[17]="siddhi";
    //  char *k=&cha3[0];
    //  char *h=&cha3[4];
    //  cout<<h<<endl;   //hi
    //  cout<<k<<endl;    //siddhi
    // char t[5]="weret";
    // "message": "a value of type \"const char [6]\" cannot be used to initialize an
entity of type \"char [5]\"",
    // char u[5]="sid";
    // cout<<u<<endl;     // sid

    char *ty="rty ";
    char *i="What A beauty ";
    cout<<ty;
    cout<<"See What Happen ";
    cout<<i<<endl;
    // rty See What Happen What A beauty

    /*
    warning: ISO C++ forbids converting a string constant to 'char*' [-Wwrite-strings]
     char *ty="rty ";
    But Warning:  forbids converting a string constant to 'char*' [-Wwrite-strings]
     char *i="What A beauty "; */
    return 0;
}
```

```cpp
#include<bits/stdc++.h>
using namespace std;
void inc(int *);
```

```cpp
int main(){
    int i=8;
    int* y=&i;
    cout<<"The Value Of i ="<<i<<endl;
    inc(&i);
    //inc(y);  // Same as Above line
    cout<<"The Value Of i ="<<i<<endl;
    return 0;
}

void inc(int *u){
    cout<<"Pointer Value: "<<u<<endl;
    cout<<*u<<endl;
    *u+=1;
    cout<<"The New Value: "<<*u<<endl;
    u+=1;
    cout<<"The New Pointer VAlue "<<u<<endl;
    cout<<"Should be print A garbage Value "<<*u<<endl;

}
/*
The Value Of i =8
Pointer Value: 0x61ff08
8
The New Value: 9
The New Pointer VAlue 0x61ff0c
Should be print A garbage Value 6422280
The Value Of i =9
*/
```