

Name: Hitendra Sisodia

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Ans-1. It is necessary to define the type of pointer at the time of declaration because different datatypes in the memory contain different bytes of storage. That is why we cannot able to store int datatype address in character pointer. as int is of 4 bytes and character is of only 1 byte.

Ans-2. An void type of pointer is an type of pointer which doesn't are associated to any datatype.

A void pointer can hold address of any type and typecasted to any type.

An void pointer is used to point integer variable by simply assigning the address of integer to that pointer.

Ex

```
int a = 10;
```

```
char b = 'h';
```

```
void *p;
```

```
p = &b // address of an char variable stored  
in void pointer.
```


Ans-3. Typecasting is the conversion of one type of datatype into another type of datatypes.

We use pointers because of its reusability. Void pointers can store the object of any type.

and to retrieve that value of any type we use proper typecasting of that particular data type.

Eg
= `int main()`
`{`

`int a = 56;`

`void * ptr;`

`ptr = &a;`

`printf("the value of a is:", (int*)`
`ptr;`

`}`

Ans-4- Step1:- start

Step2:- Initialization of for loop from $i=0$ to i is less than

Ans-4- Step1:- start

Step2:- Declaration of $i=0$, and counter $=0$

Step3:- Initialization of for loop from $i=0$ to i is less than n .

Step4:- counter \leftarrow counter + i for each value of i inside an loop.

Step5:- print (counter)

Step6:- Stop

Ans-5- A pointer is a datatype which stores the address of another variable. we use $\&$ for referencing address. and It is also known as reference operator. $*$ is used to get value at that pointer address and it is also known as dereference operator.

A pointer of integer type can hold the address of variable of type integer.

The special about one-dimensional array name is. Array name itself act as a pointer of the Array.

Array Name itself stores the base address of first value.

also, $\&a[0] \Rightarrow a$

Ans-6- We use struct keyword to define the structure.

First of all we use struct keyword and then structure name.

and, in curly braces brackets contains structure definition.

And In last we define the variable of that structure using struct <datatype> <varname>

Declaration:-

```
struct <structure name>
{
    datatype
```

structure definition

```
}
```

```
struct <structure name> <variable name>
    datatype
```

padding is used because in structure the size of the structure is more than the size of all structures members because of structure padding.

Actual size of structure members is 13 bytes.
So here total 3 bytes wasted.