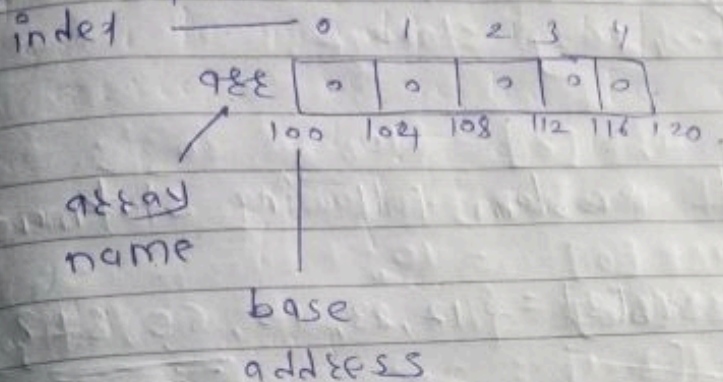
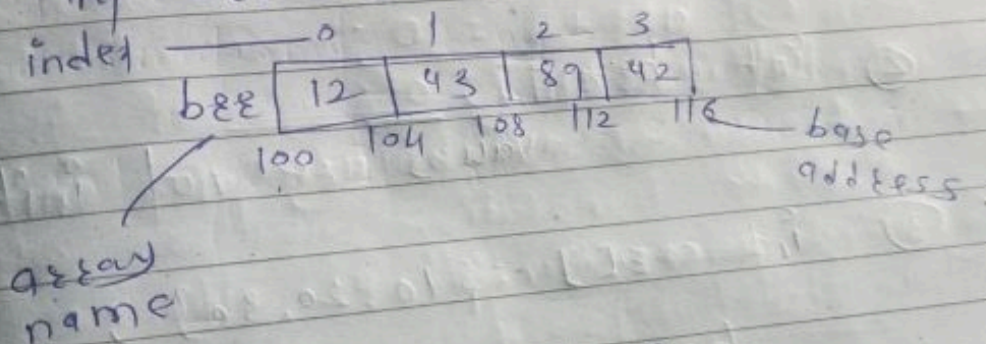


Read the statement & draw diagrammatic representation.

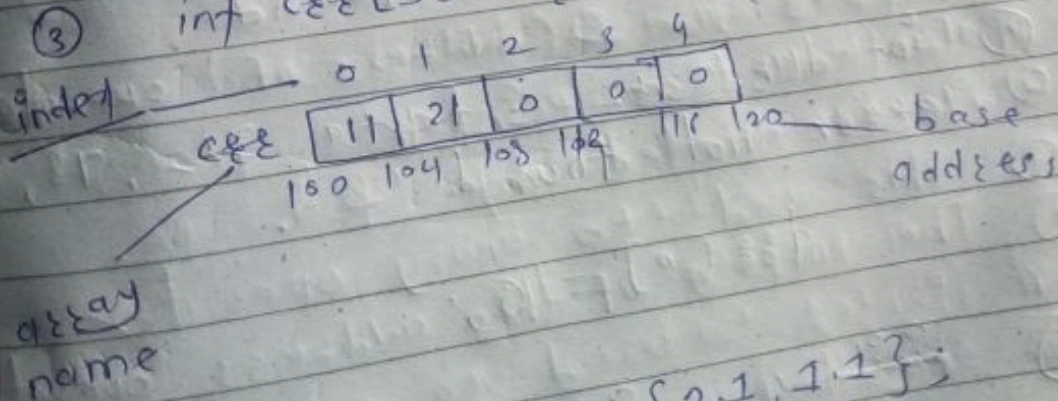
① `int arr[5]`



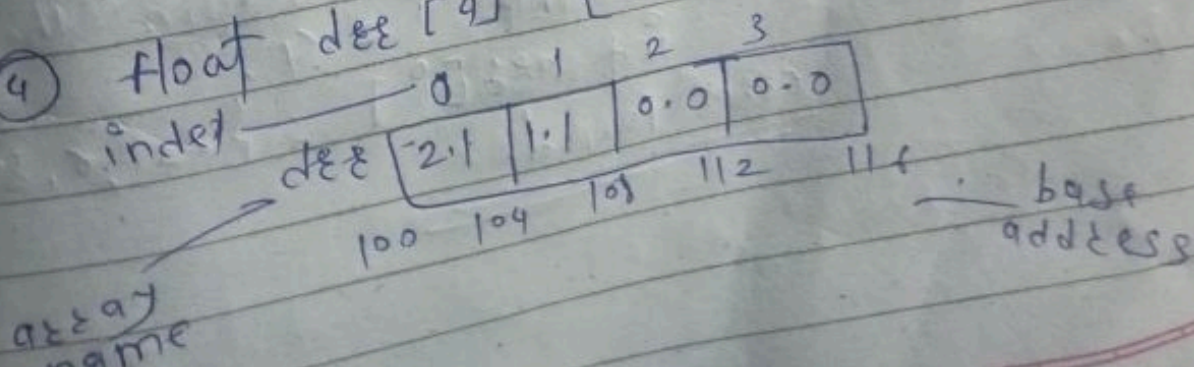
② `int brr[4] = {12, 43, 89, 42};`



③ `int crr[5] = {11, 21};`



④ `float drr[4] = {2.1, 1.1};`



⑤ `const int pemo[4] = {10, 20, 30, 40};`

index	0	1	2	3
pemo	10	20	30	40
	100	104	108	112

array
name

Q7. detect problem following statement.

① `int arr[3] = {12, 23, 45, 65, 87};`

array size are 3 but also initialize 5 values. error.

② `int arr[];` values are not initialized

③ `int arr[] = {10, 20, 30};`

does not error found.

④ `int arr[3+2] = {7+9, 3+2, 78, 9-1};`
 error not found

`arr[0] = 16;`

⑤ ~~`int i = 4;`~~ `int i = 4;`
`int arr[i] = {23, 6, 89, 32};`
 error found.

Assignment

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what is array? explain the use of array the example?

array is collection homogeneous element
if it is used to store multiple values
in a single variable, instead of declaring a
separate variables for each value.

index: 0 1 2 3 4
array datatype: `int a[5] = { 2, 4, 6, 8, 10 };`
array name: `a`
size: `5`

what are the type of array?

① one dimensional array -

index: 0 1 2 3 4
array: `int arr[5] = { 10, 20, 30, 40, 50 };`

Type: array name.

② 2 dimensional array.

row column
Type: `int arr[5][3] = { 1, 2, 3, 4, 5, 5, 4, 3, 2, 1, 1, 2, 3, 4, 5 };`
array name: `arr`
size: `5` (rows) `3` (columns)

Q3. what are the ways of which can initialize ele. of array.

→ 2 ways of initialize array.

index — 0 1 2 3 4
`int a[5] = {2, 4, 6, 8, 10};`
 p. type array name
 it is member list initialized.

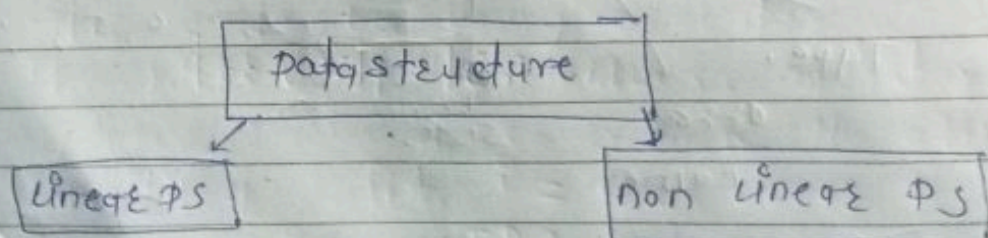
`a[0] = 2;`
`a[1] = 4;`
`a[2] = 6;`
`a[3] = 8;`
`a[4] = 10;`

} member by member initialization.

Q4. what is meant by data structure? and type of data structure?

→ data structure is way of storing & representing a data in particular format

data structure have 2 type.



Linear DS

- ① element can be sequentially arranged
- ② easy to implement
- ③ ex) stack, queue

non linear DS.

- ① element can be not sequence
- ② difficult to implement
- ③ ex) tree, graph


```
int arr[3] = {21, 23, 54};
```

```
int x = 0;
```

```
x = arr[2] + 21 + arr[0];
```

```
x++;
```

```
printf("%d", x);
```

```
return 0;
```

output

x = 97

Q9.

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

```
int main () {
```

```
float arr[4] = {98.3, 4.3, 51.6, 7.6};
```

```
int i = 0;
```

```
printf("%f", arr[i]);
```