

Padding in Structure

```

struct xyz
{
    char a;
};
    
```

1 Byte

```

struct xyz
{
    char a;
    int b;
};
    
```

5 Byte 8 Bytes

0	a
1	" "
2	" "
3	" "
4	b

3 Bytes for padding

How to find padding size?

Rule - Total size of structure must be divisible by the alignment requirement of its largest member.

char 1 Byte Alignment
 int 4 Bytes
 long int 8 Bytes
 float 4 Bytes

```

struct xyz
{
    char a;
    int b;
    char c;
};
    
```

largest element = b size 4 Byte

Ans: 12 Bytes

0	a
1	.
2	.
3	.
4	.
5	a
6	.
7	.
8	c
9	.
10	.
11	.

3 Bytes padding

total 9 Bytes

3 Bytes padding

12

```

struct xyz
{
    char a;
    int b;
    char c;
    char d;
};
    
```

0	a	1 Byte
1	.	1 B
2	.	1 B
3	.	1 B
4	b	4 Byte - int b
5	.	
6	.	
7	.	
8	c	1 Byte
9	d	1 Byte (total = 10)
10	.	
11	.	

Compiler adds 2 Bytes for padding

Ans:- 12 Bytes

```

struct xyz
{
    char a;
    int b;
    char c;
    char d;
    char e;
};
    
```

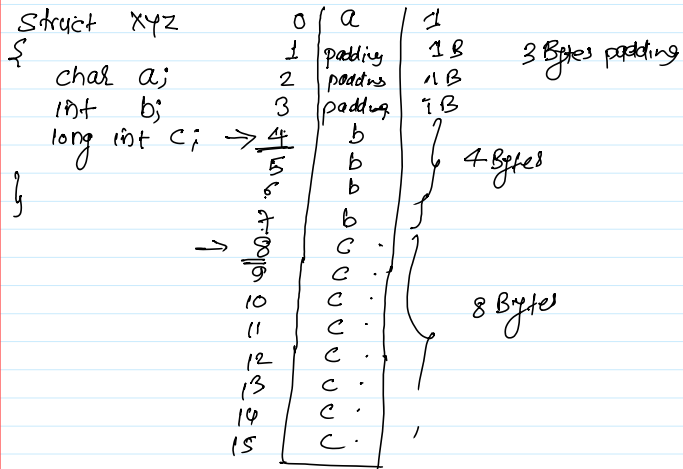
0	a
1	.
2	.
3	.
4	b
5	b
6	b
7	b
8	c
9	d
10	e
11	.

padding 3 B

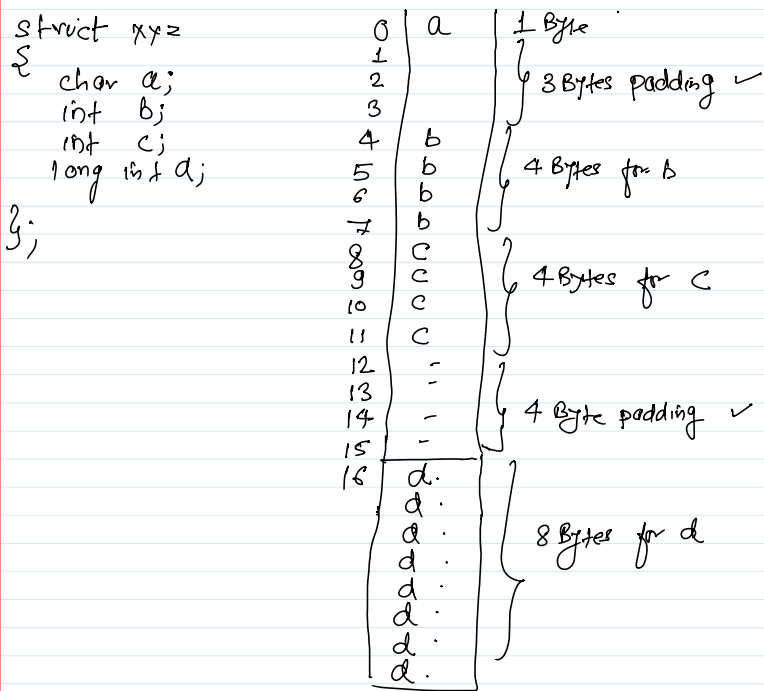
4 Byte of b

11 Bytes

Ans: 12



Ans:- 16



Ans:- 24

