

Arrays and Strings

#6. Array's

Page No.

Date

→ Linear collection of data (same type) that are stored together in contiguous memory space

`x[5] = 20;` // wrong. d.p. for

`int main()`

{

`int a, x[5], b;`

`a = 6;`

`b = 6;`

`x[5] = 20;`

`x[6] = 20`

`printf("-d -d -d", a, b, x[5]);`

O/P ⇒ 6 6 20

O/P = 5 20 0

memory allocation

`char a[5]`

`short int b[5]`

`long long int c[5]`

`long int d[5]`

5 × 1 bytes = 5 bytes

5 × 2 bytes = 10 bytes

5 × 8 bytes = 40 bytes

5 × 4 bytes = 20 bytes

`int a;`

`a = 10;` — decimal

`a = 010;` — octal

`a = 0x10;` — Hexa decimal

`a = 'A';` — symbol

`a = -5;` — negative

`a = 0b10101010` — binary

Arrays and Strings

Page No.	
Date	

Symbol is allocates only char.

Due to ASCII $\rightarrow 0 - 127$ \rightarrow 128 symbols
 External ASCII $\rightarrow 128 - 255$ \rightarrow 128 symbols

ex: char a;	ASCII code	memory
a = 'A';	A = 65	a = 65
printf("%d", a);		

OP \Rightarrow 65

ex:	a[0]	E
	a[1]	C
	a[2]	E
	a[3]	N

```
char a[4];
a[0] = 'E';
a[1] = 'C';
a[2] = 'E';
a[3] = 'N';
```

```
printf("%c %c %c %c", a[0], a[1], a[2], a[3]);
```

```
char a[4] = {'E', 'C', 'E', 'N'};
```

```
char a[4] = "ECEN";
```

```
printf("%s", a[0]);
```

String : Group of character's end's with $\backslash 0$.

Arrays and Strings

Page No.

Date

```
int main()
{
    char a[] = "EEEN Welcomes You" ;
    char b[9];

    for ( i=0 ; i<8 ; i++ )
    {
        b[i] = a[8+i] ;
    }

    b[8] = '\0' ;
    printf("%s", b) ;
}
```


Arrays and Strings

Session - 67

Arrays & Strings

Date:
Page:

string: [always end with 0]

group of character's

← Welcome - eg

```
char a[10];
```

```
scanf ("%s", a) → fa, a[0], a
```

```
printf ("%c", a[0]) → W
```

```
printf ("%c%c%c", a[0], a[1], a[2])
```

o/p → Wel

ex:

```
char i;
```

```
char a[] = "Hey";
```

```
char b[] = "Harsh";
```

```
i = 0
```

```
while (b[i] != 0)
```

```
{
```

```
    a[i] = b[i];
```

```
    i++;
```

```
}
```

	memory
a[0]	H
a[1]	E
a[2]	y
a[3]	
a[4]	
b[0]	H
b[1]	A
b[2]	R
b[3]	S
b[4]	H
b[5]	0

Program to count char

```
int count;
```

```
char a[] = "welcome Harshal";
```

```
count = 0;
```

```
while (a[count] != 0)
```

```
{
```

```
    count++;
```

```
}
```


Arrays and Strings

Date :
Page :

- program to reverse Array :

```
int a, b, count ;  
b[20];  
a[20];
```

```
for (i=0; i<count; i++)  
{  
    b[i] = a[count-i-1]  
}
```

- program to print last char of string

```
char a[] = "welcome to Home";  
i=0;  
while (a[i] != 0)  
{  
    i = i+1;  
}
```

```
printf ("%c", a[i-1]);  
      ↓  
    symbol
```