

(Video 16) Constants in C - Part 1.

→ Something that never changes.

once defined can never be modified later in the code.

2 ways to define constants:

Defining constants —

i) Using `#define`

ii) Using `const`.

`#define NAME value`

→ also called macro

`#include <stdio.h>`

`#define PI 3.14159`

`int main() {`

`printf("9.05f", PI);`

`return 0;`

`}`

→ Don't add semicolon at the end.

define Name value No semicolon needed.

→ Choosing capital letter for NAME is good.

confusion राग

→ Whatever inside " " won't replace.

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

```
#define value 89
```

```
int main() {
```

```
    printf("value is %d", value);
```

```
    return 0;
```

```
}
```

ये र परा लगे अमल
cos के string.

→ We can use macros like function.

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

```
#define add(x,y) x+y
```

```
int main() {
```

```
printf("addition of 2 numbers: %d", add(4,2))
```

```
return 0;
```

```
}
```

3+4

→ we can write multiple line using \

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

```
#define greater(x,y) if (x>y) \
```

```
printf("%d is greater than %d", x, y);
```

```
else \
```

```
printf("%d is less than %d", x, y);
```

```
int main() {
```

```
greater(5,6);
```

```
return 0;
```

```
}
```

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

```
#define add(x,y) x+y
```

```
int main() {
```

```
printf("results of expression a+b+c = %d", 5*add(4,3));
```

```
return 0;
```

```
}
```

5 * 4 + 3

→ First expansion then evaluation.

$$5 \times (4+3) = 5 \times 7 = 35 \text{ wrong}$$

equation is wrong $5 \times 4 + 3 = 20 + 3 = 23$ ✓

→ There are some predefined macros like -- DATE --,

-- TIME --.

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

```
int main() {
```

```
printf("Date: %s\n", -- DATE --);
```

```
printf("Time: %s\n", -- TIME --);
```

```
return 0;
```

```
}
```