

C Language Tutorial (Basic to Advanced)

Topics to be covered :

- Installation + Setup
- Chapter 1 - Variables, Data types + Input/Output
- Chapter 2 - Instructions & Operators
- Chapter 3 - Conditional Statements
- Chapter 4 - Loop Control Statements
- Chapter 5 - Functions & Recursion
- Chapter 6 - Pointers
- Chapter 7 - Arrays
- Chapter 8 - Strings
- Chapter 9 - Structures
- Chapter 10 - File I/O
- Chapter 11 - Dynamic Memory Allocation

Conditional Statements (Chapter 3)

1. If-else

```
#include<stdio.h>

int main() {
    int age = 19;
    if(age >= 18) {
        printf("you are an adult");
    }
    else {
        printf("you are not an adult");
    }
    return 0;
}
```

> check if a number is odd or even

```
#include<stdio.h>

int main() {
    int number;
```

```
scanf("%d", &number);

if(number % 2 == 0) {
    printf("even");
}
else {
    printf("odd");
}

return 0;
}
```

> Use of else if

```
#include<stdio.h>

int main() {
    int age;
    printf("Enter age : ");
    scanf("%d", &age);

    if(age < 12) {
        printf("child");
    }
    else if(age < 18) {
        printf("teenager");
    }
    else {
        printf("adult");
    }

    return 0;
}
```

2. Ternary Operator

```
#include<stdio.h>

int main() {
    int age;
    printf("Enter age : ");
    scanf("%d", &age);

    age > 18 ? printf("adult \n") : printf("not adult \n");

    int number = 7;
```

```
int luckyNumber = 7;

number == luckyNumber ? printf("you are lucky \n") : printf("you are not
lucky \n");

return 0;
}
```

3. Switch (integer)

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

int main() {
    int day = 5;
    switch(day) {
        case 1 : printf("monday \n");
                break;
        case 2 : printf("tuesday \n");
                break;
        case 3 : printf("wednesday \n");
                break;
        case 4 : printf("thursday \n");
                break;
        case 5 : printf("friday \n");
                break;
        case 6 : printf("saturday \n");
                break;
        case 7 : printf("sunday \n");
                break;
    }
    return 0;
}
```

4. Switch (character)

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

int main() {
    char day = 'f';
    switch(day) {
        case 'm' : printf("monday \n");
                break;
    }
}
```

```
    case 't' : printf("tuesday \n");
                break;
    case 'w' : printf("wednesday \n");
                break;
    case 'T' : printf("thursday \n");
                break;
    case 'f' : printf("friday \n");
                break;
    case 's' : printf("saturday \n");
                break;
    case 'S' : printf("sunday \n");
                break;
}
return 0;
}
```