C Language

Chapter # 9

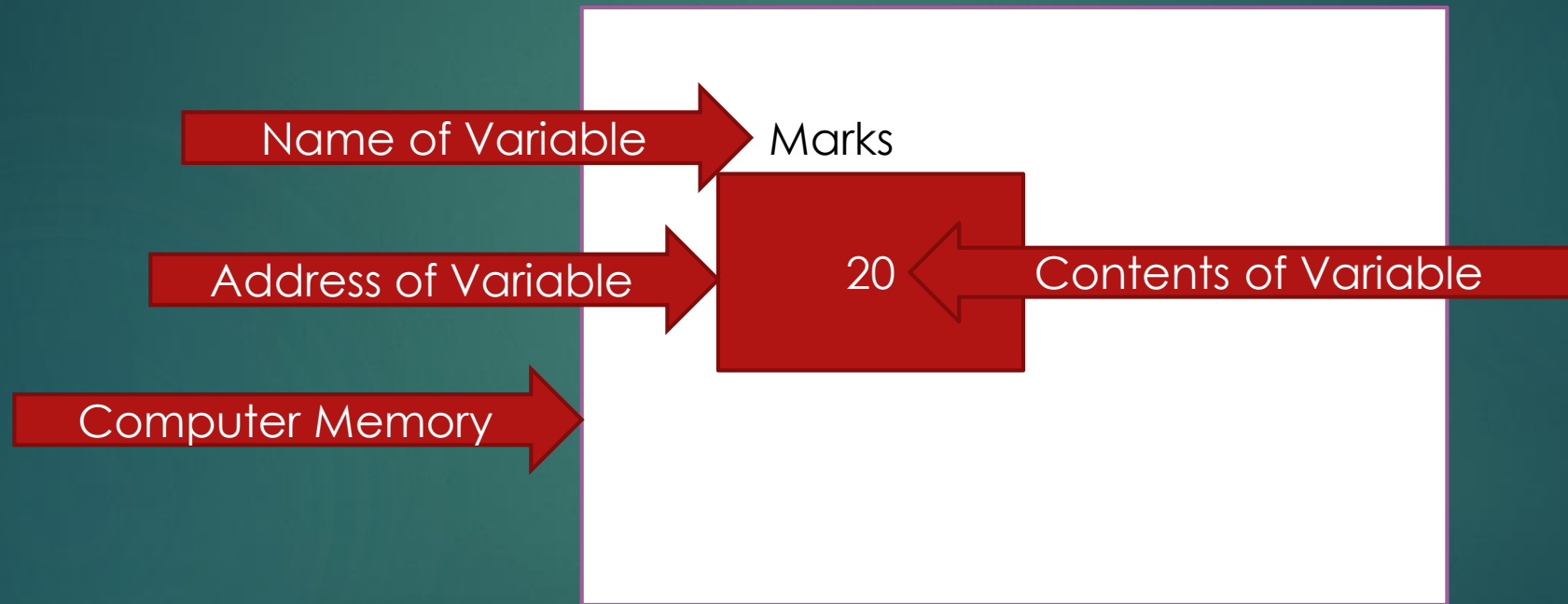**Elements of C language**

Lecture: 08

Today's Lecture

▶ **What is Variables**

▶ **Variable Declaration**

▶ **Variable Initialization**

What is Variable

► A variable is a named memory location or memory cell.

► it is used to store programs' input data and its computational results during execution.

► The value of a variable may change during the execution of program.

► However, the name of variable cannot be changed.

► The variables are created in RAM. RAM is temporary memory. That is why the data stored in variable also temporary. The data stored in the variable is automatically removed when program ends.

Variable in memory

Variable Declaration

▶ The process of specifying the variable name and its type is called variable declaration.

▶ A program can have as many variables as needed.

▶ A variable can be declared any where in the program before its use.

▶ Once a variable is declared, its data types cannot be changed during program execution.

Variable Declaration

Syntax

Data_type Variable_name;

Examples

int x;

float average;

char grade;

Variable Initialization

▶ The process of assigning a value to a variable at the time of declaration is known as variable initialization.

▶ The equal sign **=** is used to initialize a variable.

▶ Variable name is written on left side and the value is written on the right side of equal sign.

Variable Initialization

Syntax

Data_type Variable_name = value;

Examples

int x = 8;

float average = 9.4;

char grade 'A';

Examples

```
int a;
a = 23;

int a = 23;
```

```
float avg;
avg = 4.3;

float avg = 4.3;
```

The End

Read this topic from your books and ask question if any confusion.

JAZAKALLAH