



SNS COLLEGE OF TECHNOLOGY
Coimbatore-35
An Autonomous Institution

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DEPARTMENT OF INFORMATION TECHNOLOGY
PROGRAMMING FOR PROBLEM SOLVING
I YEAR
UNIT 2 – C PROGRAMMING BASICS
DECLARING & INITIALIZING VARIABLES

Variables:

- Variables are named memory locations that have a type, such as integer or character, which is inherited from their type.
- The type determines the values that a variable may contain and the operations that may be used with its values.
- To declare a variable specify data type of the variable followed by its name. Variable declaration always ends with a semicolon
- Variable names should always be meaningful and must reflect the purpose of their usage in the program.

Variable Declaration

Syntax: Type var_name;

Ex: int emp_num;

float alary;

char grade;

double balance_amount;

unsigned short int acc_no;

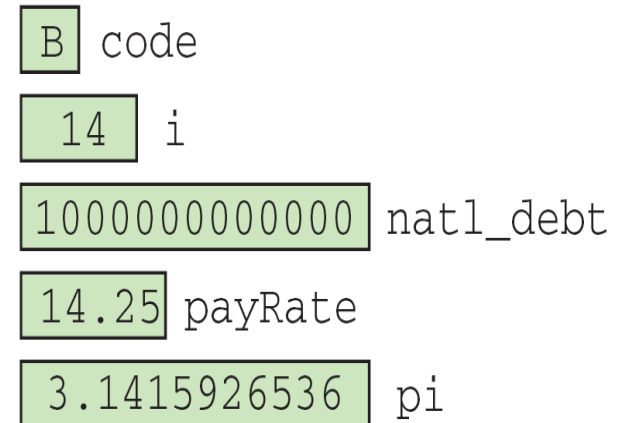
Variable Initialization

- When a variable is defined, it contains unknown value. The variable has to be initialized with a known value
- If a variable is not initialized, the value of variable may be either 0 or garbage depending on the storage class of the variable.
- We must initialize any variable with known data before

executing the function

```
char code = 'b';  
  
int i = 14;  
  
long long natl_debt = 10000000000000;  
  
float payRate = 14.25;  
  
double pi = 3.1415926536;
```

Program



The memory diagram shows five variables, each with its value in a green box:

- code: B
- i: 14
- natl_debt: 10000000000000
- payRate: 14.25
- pi: 3.1415926536

Memory

Fig: Variable Initialization

THANK YOU