C Programming

Trainer : Smita Kadam

Email ID : smita@sunbeaminfo.com

Storage Classes

- auto
- register
- static
- extern

Should understand related terms:

- **Scope:**
  - It describes who can access resource like memory, function, data type etc.
- **Life**
  - It describes time span how long memory will retains in alive / in use mode.

Storage Classed

- **auto**
  - All local variables by default to be considered as auto

- **register**
  - Request can be given to identify CPU register.
  - Limited Availability
  - No surety system will satisfy request
  - If request is successful will result into faster performance
  - If request unsuccessful will slow down the process . if registers are not available request will be converted implicitly to auto type
  - We can not take address of register.
  - It is allowed to request inside function.

Storage Classed

- **static**
  - Helps to retain state of variable through multiple call of same function in which it is defined
  - Can be initialised with constant.
  - If not initialised default value is zero.
  - Static variable is initialised only once on first invocation of function providing it is initialised at the time of declaration.
  - Can have page level and function level

- **extern**
  - Applicable to global resources like variable, function, data type.
  - It describes pure declaration

- **Points to Note:**

  - Call to a function within it own definition
  - Need to mention terminating condition.
  - May result to stack over flow state.
  - Helps to call block of statements repeatedly
  - Completes job of function which has been invoked at the last.

Loop Vs Recursion

Loop	Recursion
• Need of Modification statement else will result into infinite loop	• Need of Terminating condition else will result stack overflow state
• Less time consumption	• More time consumption
• Less memory utilisation	• More memory utilisation
• Follows FIFO	• Follows LIFO

Thank you!