Register Allocation and Assignment :

⇒ Register allocation means, what value in a should reside in a register.

⇒ Register Assignment means in which register, each value should reside.

⇒ For Register Allocation we have three stratagies here :

1. Global register Allocation
2. Register Allocation for outer loops
3. Register Allocation for graph colouring

Global Register Allocation

⇒ All Live variables should be stored at the end of each block.

⇒ Allocation of variables to specific registers, that consist across the block.

Register Allocation for outer loops

⇒ If outer loop L_1 contains inner loop L_2 names allocated register in L_2 need not be allocated register in L_1 'L$_2$

Register Allocation for Graph colouring

⇒ Graph colouring is simple systematic technique

⇒ Here, initially the target machine instructions are selected

⇒ Each procedure, a register interference graph is constructed.

——— x x x ———