Compiler Design
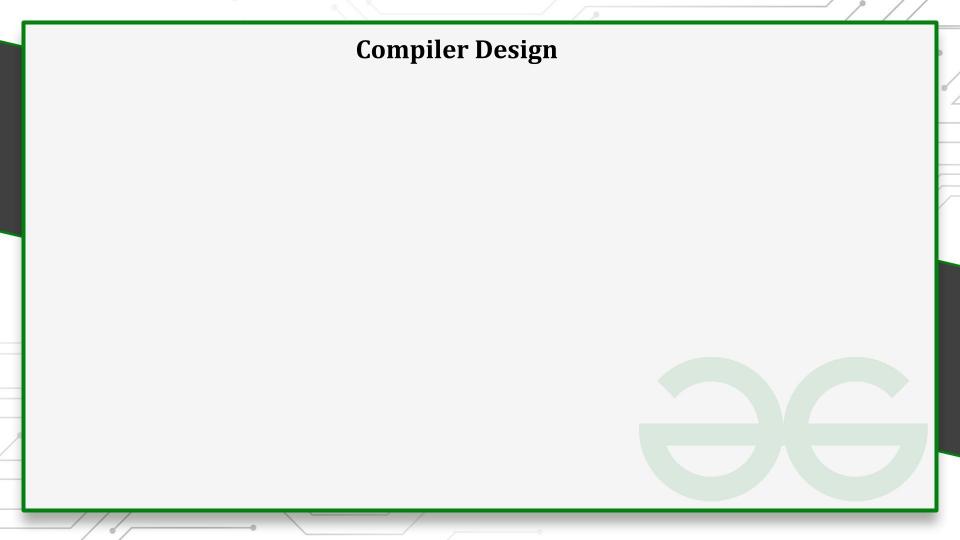
Today's Class Topics

-Code optimization
-Machine Independent optimization
-Machine dependent optimization
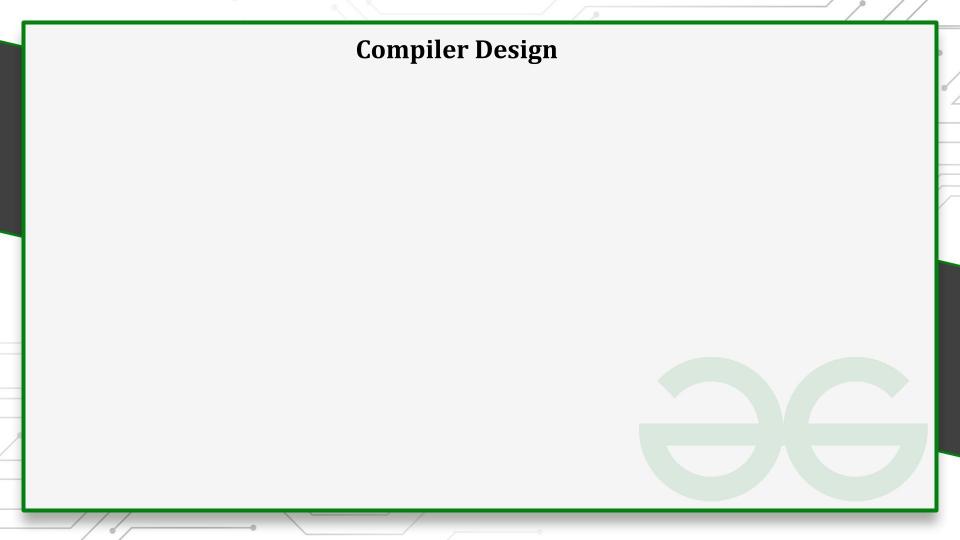-Liveness analysis

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Code optimization: Code optimization is a process of reducing the number of instructions without affecting the outcome of the source program.

Code optimization means improvement of the program, it increase the speed and performance of the programs it reduce the space consumed and reduces the time required to execute the program

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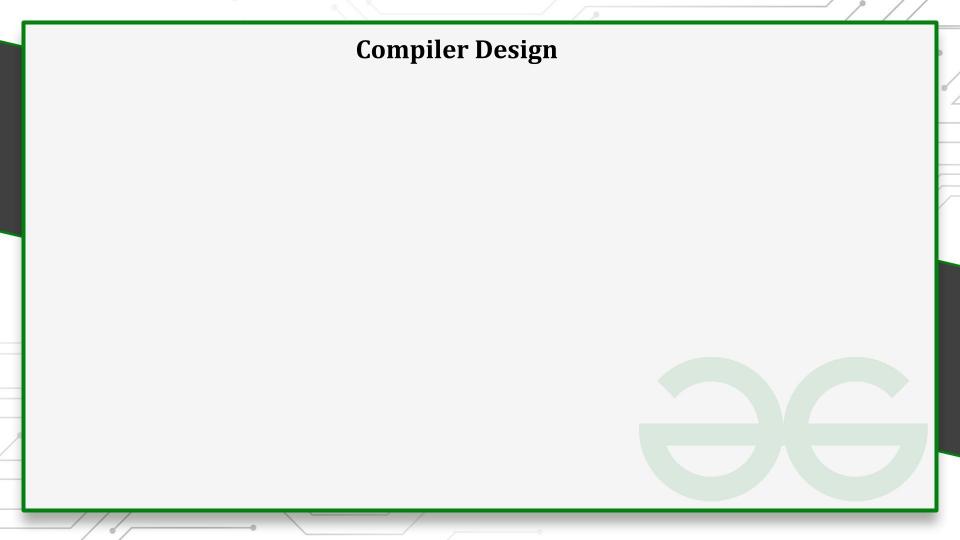
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Liveness analysis: In a computer the number of registers are limited and a program may contain Hues number of variable whenever we execute the program we allocate the registers to the variables those are in live
Those variables are dead they will be move back from register to the main memory, Moving a variables from the registers to the main memory is called as memory **spilling.**

A variable x is said to be live at any statement if it is used in the statement or any where in the subsequent program before it is defined

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Application of Liveness analysis:
  - Register allocation
  - Dead code elimination

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Thank You !