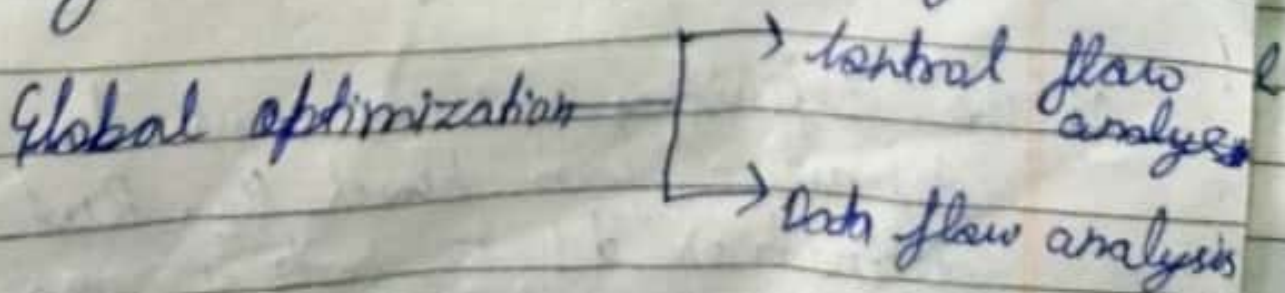


Sec-4

Q-2 - Answer

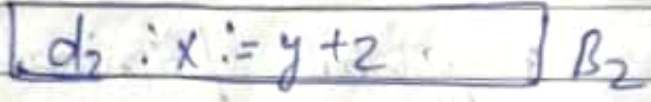
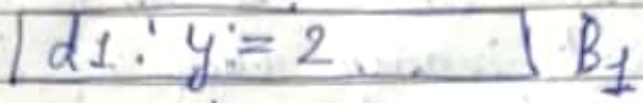
Global data analysis:-

- 1) The local optimization has a very restricted scope on the other hand the global optimization over a broad scope such as procedure or function body.
- 2) For a global optimization a program is represented in the form of program flow graph. The program flow graph is a graphical representation in which each node represents the basic block and edges represent the flow of control from one block to another.
- 3) There are two types of analysis performed for global optimizations: control flow analysis and data flow analysis.

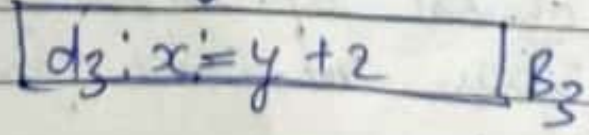
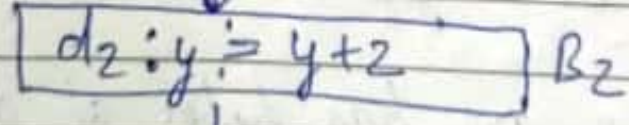
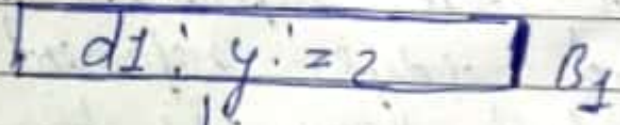


Used in code optimization

1] A definition D reaches at point p if there is a path from D to p along which D is not killed.



2] A definition D of variable x is killed when there is a redefinition of x .



3] The definition d_1 is said to be a reaching definition for block B_2 . But the definition d_1 is not a reaching definition in block B_3 , because it is killed by definition d_2 in block B_2 .