

(ii) The set of all the strings with twice as many 0's as 1's.

$$G = (V, T, P, S)$$

$$V = \{S\}$$

$$T = \{0, 1\}$$

$$S = \{S\}$$

$$P = \{ S \rightarrow S1S0S0S \mid S0S1S0S \mid S0S0S1S \mid \epsilon \}$$

(i) Set of all strings of a's and b's that are not of the form ww. (no string repeated).

$$G = (V, T, P, S)$$

$$V = \{S, A, B\}$$

$$T = \{a, b\}$$

$$S = \{S\}$$

$$P = \{ \begin{array}{l} S \rightarrow AB \mid BA \mid A \mid B \\ A \rightarrow aAa \mid aAb \mid bAa \mid bAb \mid a \\ B \rightarrow aBa \mid aBb \mid bBa \mid bBb \mid b \end{array} \}$$