

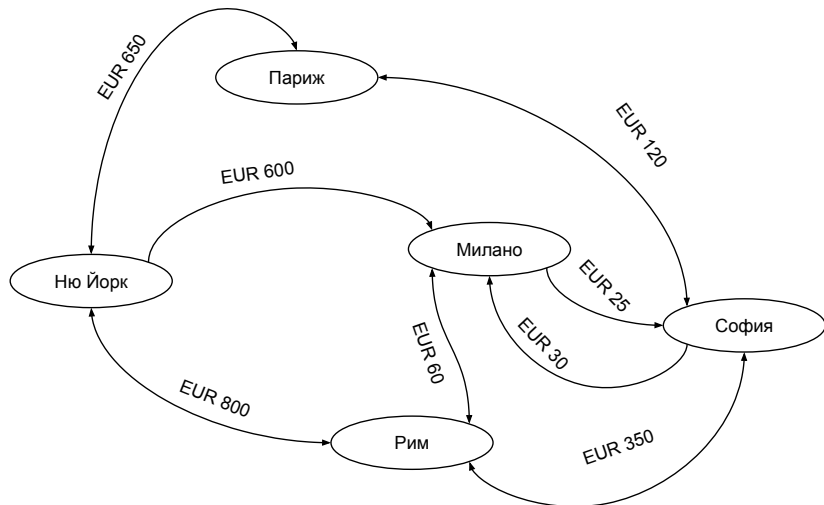
Работа с графи

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5 януари 2017 г.

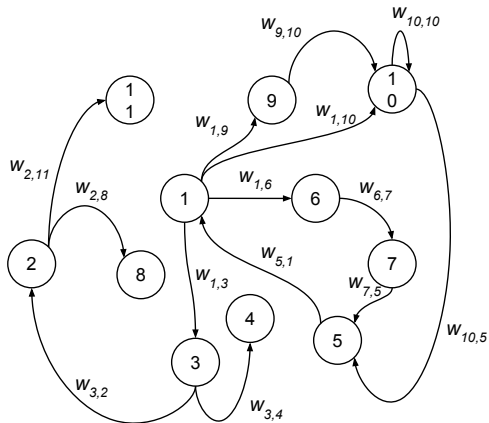
Интуиция

Възли, дъги, цени



Възли, дъги, цени

$$G = \langle V, E, w \rangle, E = V \times V, w : E \rightarrow 2^R$$

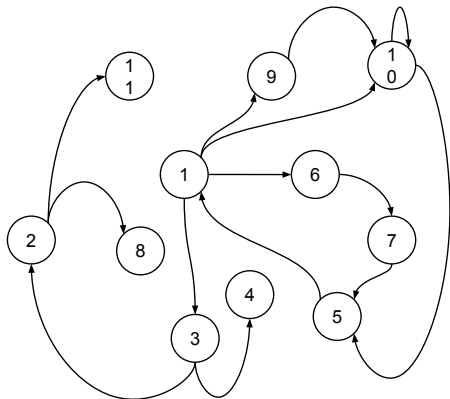


Матрица с тегла

$$W_{|V| \times |V|} : (w)_{u,v} = w(u, v)$$

Възли, дъги, без цени

$$G = \langle V, E \rangle, E = V \times V$$



Матрица на съседство

Incidence Matrix

$A_{|V| \times |V|} : (a)_{u,v} \in \{true, false\}$

$(a)_{u,v} \leftrightarrow (u, v) \in E$

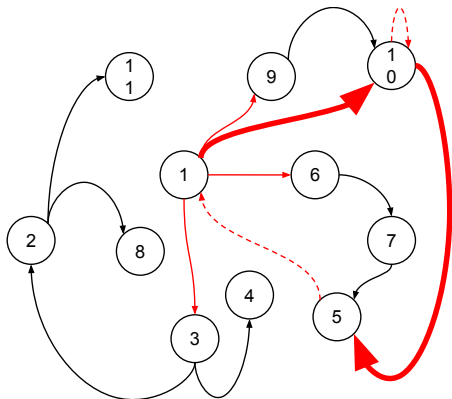
Представяне

- Матрица
- Списък със съседни

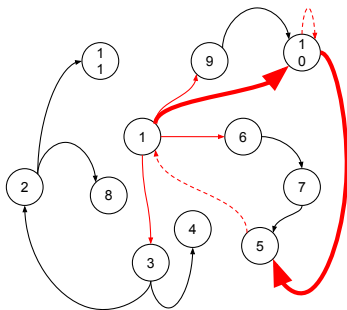
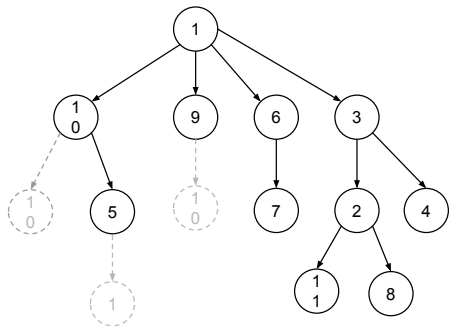
Прости операции. Сериализация

Обхождания и търсене на път

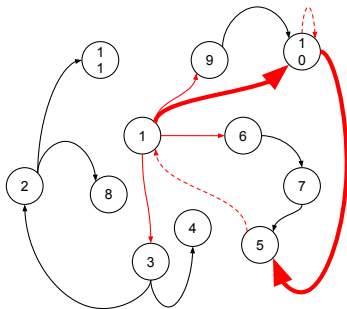
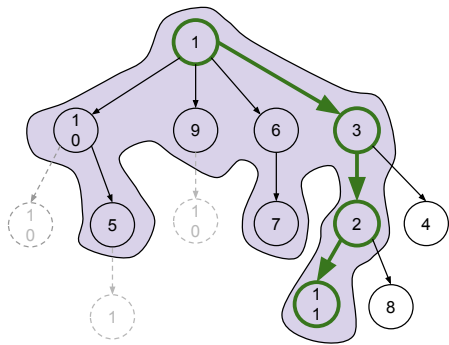
Обхождане в дълбочина с рекурсия и стек



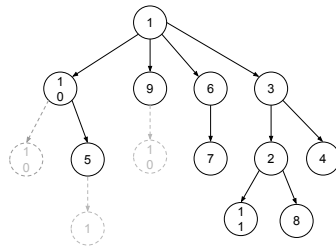
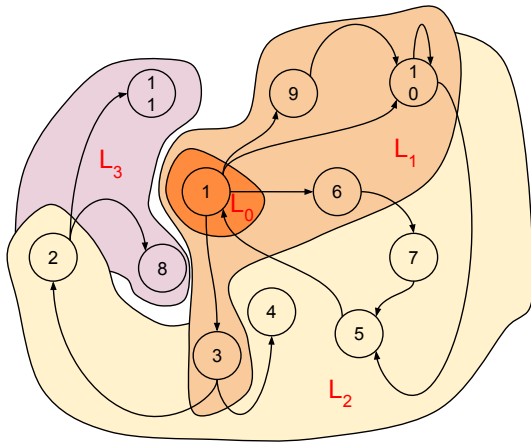
Обхождане в дълбочина



Обхождане в дълбочина



Обхождане в широчина



Въпроси?