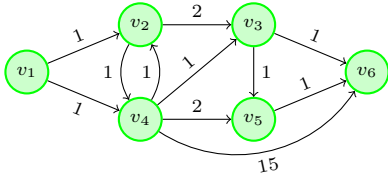
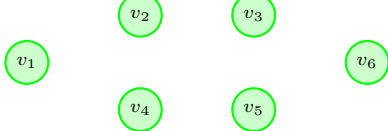


Alg. Dijkstry:

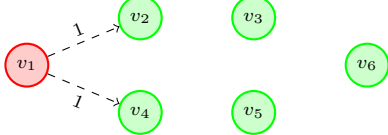
Graf:



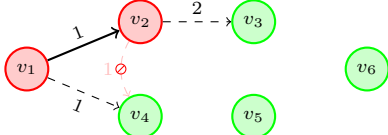
Krok 0, $\mathcal{S} = \emptyset$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = D_{v_1 v_3} = D_{v_1 v_4} = D_{v_1 v_5} = D_{v_1 v_6} = \infty$:



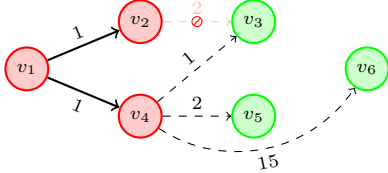
Krok 1, $\mathcal{S} = \{v_1\}$,
 $D_{v_1 v_1} = 0; D_{v_1 v_2} = 1, D_{v_1 v_4} = 1, D_{v_1 v_3} = D_{v_1 v_5} = D_{v_1 v_6} = \infty$:



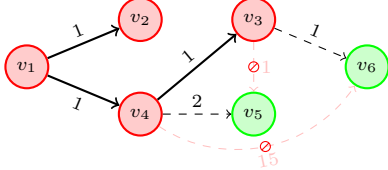
Krok 2, $\mathcal{S} = \{v_1, v_2\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 1; D_{v_1 v_4} = 1, D_{v_1 v_3} = 3, D_{v_1 v_5} = D_{v_1 v_6} = \infty$:



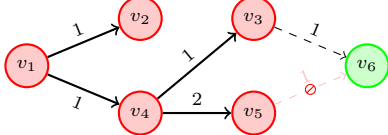
Krok 3, $\mathcal{S} = \{v_1, v_2, v_4\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 1; D_{v_1 v_4} = 1; D_{v_1 v_3} = 2, D_{v_1 v_5} = 3, D_{v_1 v_6} = 16$:



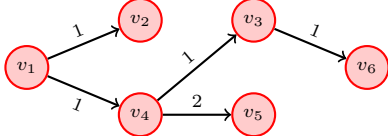
Krok 4, $\mathcal{S} = \{v_1, v_2, v_3, v_4\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 1 = D_{v_1 v_4} = 1, D_{v_1 v_3} = 2$;
 $D_{v_1 v_5} = 3, D_{v_1 v_6} = 4$:



Krok 5, $\mathcal{S} = \{v_1, v_2, v_3, v_4, v_5\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 1 = D_{v_1 v_4} = 1, D_{v_1 v_3} = 2, D_{v_1 v_5} = 3$;
 $D_{v_1 v_6} = 3$:

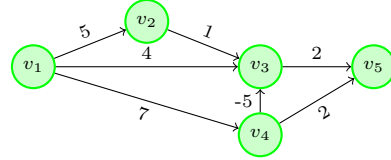


Krok 6, $6 = N, \mathcal{S} = \{v_1, v_2, v_3, v_4, v_5, v_6\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 1 = D_{v_1 v_4} = 1, D_{v_1 v_3} = 2, D_{v_1 v_5} = D_{v_1 v_6} = 3$:

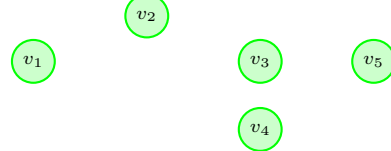


Zmodyfikowany alg. Dijkstry:

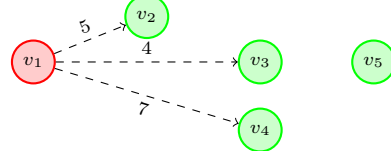
Graf:



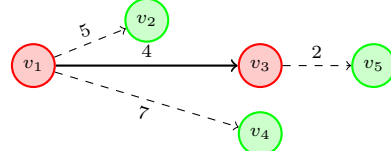
Krok 0, $\mathcal{S} = \emptyset$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = D_{v_1 v_3} = D_{v_1 v_4} = D_{v_1 v_5} = \infty$:



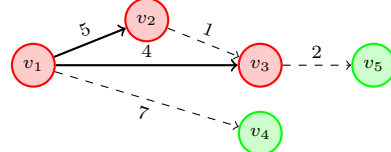
Krok 1, $\mathcal{S} = \{v_1\}$,
 $D_{v_1 v_1} = 0; D_{v_1 v_3} = 4, D_{v_1 v_2} = 5, D_{v_1 v_4} = 7, D_{v_1 v_5} = \infty$:



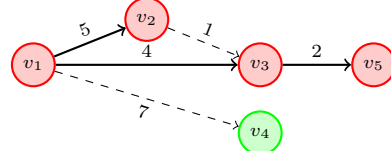
Krok 2, $\mathcal{S} = \{v_1, v_3\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_3} = 4; D_{v_1 v_2} = 5, D_{v_1 v_4} = 7, D_{v_1 v_5} = 6$:



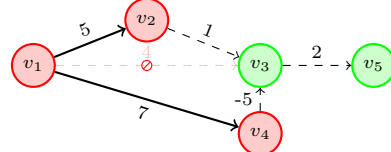
Krok 4, $\mathcal{S} = \{v_1, v_2, v_3\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 5, D_{v_1 v_3} = 4; D_{v_1 v_5} = 6, D_{v_1 v_4} = 7$:



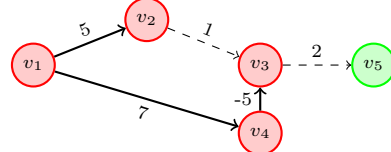
Krok 5, $\mathcal{S} = \{v_1, v_2, v_3, v_5\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 5, D_{v_1 v_3} = 4, D_{v_1 v_5} = 6; D_{v_1 v_4} = 7$:



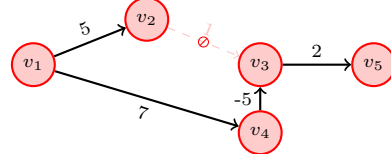
Krok 6, $\mathcal{S} = \{v_1, v_2, v_4\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 5, D_{v_1 v_4} = 7; D_{v_1 v_3} = 2, D_{v_1 v_5} = 6$:



Krok 7, $\mathcal{S} = \{v_1, v_2, v_3, v_4\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 5, D_{v_1 v_3} = 2, D_{v_1 v_4} = 7; D_{v_1 v_5} = 4$:

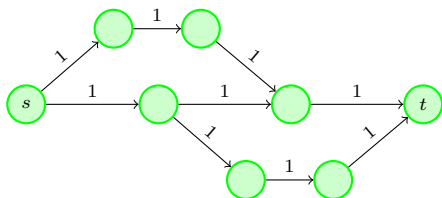


Krok 8, $8 \geq N, \mathcal{S} = \{v_1, v_2, v_3, v_4\}$,
 $D_{v_1 v_1} = 0, D_{v_1 v_2} = 5, D_{v_1 v_3} = 2, D_{v_1 v_4} = 7, D_{v_1 v_5} = 4$:

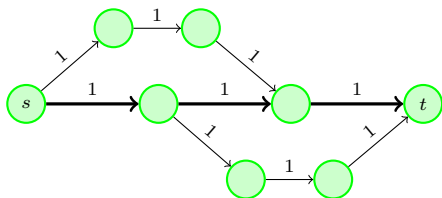


Alg. Bhandari'ego:

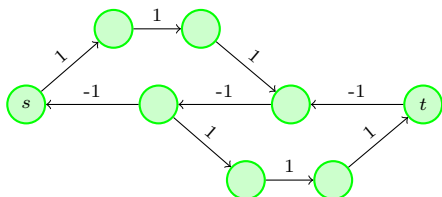
Graf:



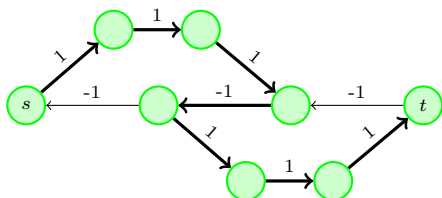
Krok 1, znalezienie najkrótszej ścieżki między punktami:



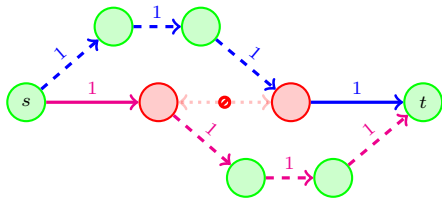
Krok 2, odwrócenie zwrotu oraz wartości wag na najkrótszej ścieżce:



Krok 3, znalezienie najkrótszej ścieżki między punktami, ale w zmodyfikowanym grafie:



Krok 4, usunięcie nakładającego się segmentu, naprzemienne pokolorowanie segmentów ścieżek:



Krok 5, złożenie pary najkrótszych ścieżek z jednokolorowych fragmentów:

