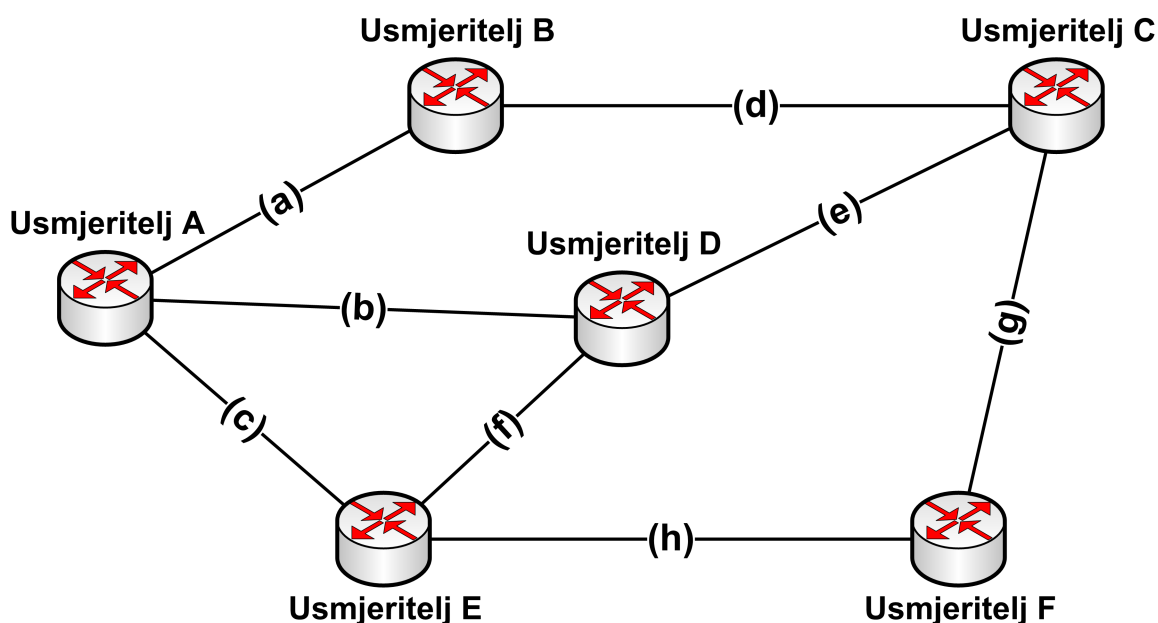


1. domaća zadaća: algoritmi usmjeravanja

Slika prikazuje skup usmjerenika međusobno povezanih serijskim vezama. Na svakoj vezi naznačite pripadajući težinski faktor ovisno o Vašem matičnom broju (*pogledajte primjer ispod slike*), a znamenka „0“ neka predstavlja težinu „10“. Upotrebom Dijkstrinog algoritma potrebno je odrediti najkraće puteve za usmjerenik A i za usmjerenik C, uzimajući u obzir pripadajuće težinske faktore. Rješenje mora uključivati potpuni ispis sadržaja skupova S i T u svakom od koraka izvođenja Dijkstrinog algoritma te oznake stabala najkraćeg puta.



h g f e d c b a

Matični broj (primjer): 0 0 3 6 4 5 5 8 5 4

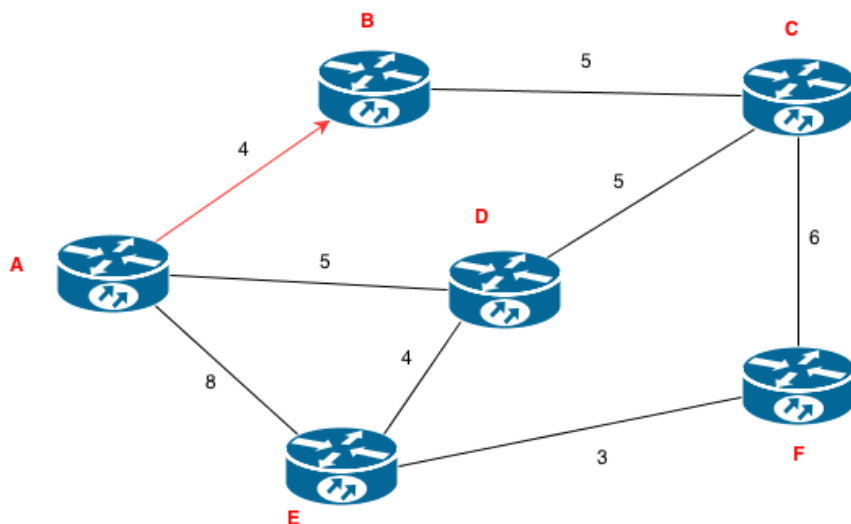
Rješenje domaće zadaće **pretvorite u format PDF** te predajte najkasnije do 5. studenoga 2013. (utorak) u 10:00 sati. Rješenje zadaće se predaje putem aplikacije Moodle.

RJEŠENJE:

1. Usmjeritelj A --> Usmjeritelj B

1) $S = \{(A, 0)\}$
 $T = \{(B, 4), (C, \infty), (D, 5), (E, 8), (F, \infty)\}$

2) $S = \{(A, 0), (B, 4)\}$
 $T = \{(C, 9), (D, 5), (E, 8), (F, \infty)\}$

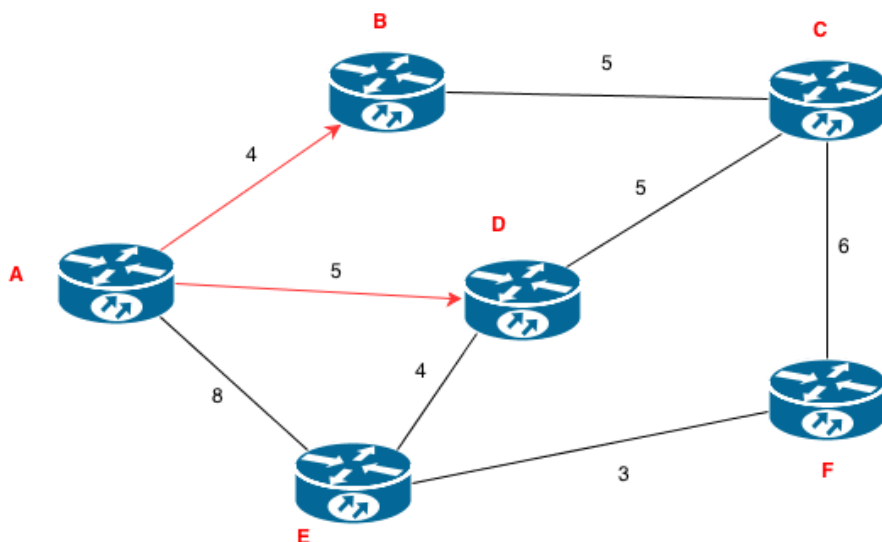


2. Usmjeritelj A --> Usmjeritelj D

1) $S = \{(A, 0)\}$
 $T = \{(B, 4), (C, \infty), (D, 5), (E, 8), (F, \infty)\}$

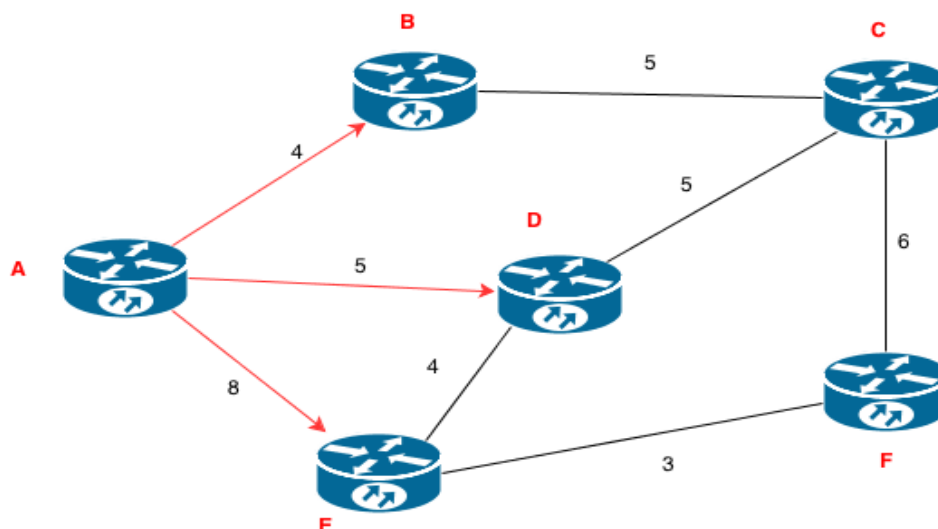
2) $S = \{(A, 0), (B, 4)\}$
 $T = \{(C, 9), (D, 5), (E, 8), (F, \infty)\}$

3) $S = \{(A, 0), (B, 4), (D, 5)\}$
 $T = \{(C, 9), (E, 8), (F, \infty)\}$



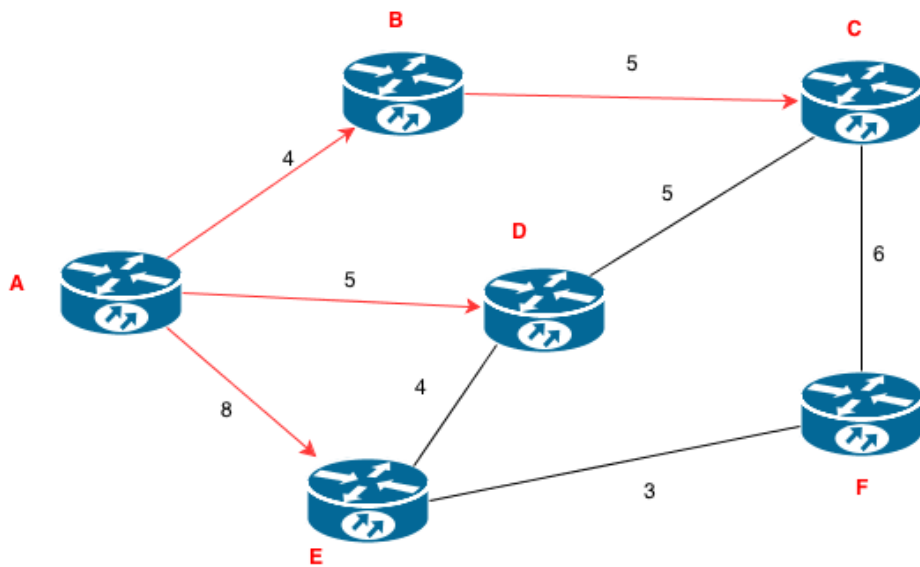
3. Usmjeritelj A --> Usmjeritelj E

- 1) $S = \{(A, 0)\}$
 $T = \{(B, 4), (C, \infty), (D, 5), (E, 8), (F, \infty)\}$
- 2) $S = \{(A, 0), (B, 4)\}$
 $T = \{(C, 9), (D, 5), (E, 8), (F, \infty)\}$
- 3) $S = \{(A, 0), (B, 4), (D, 5)\}$
 $T = \{(C, 9), (E, 8), (F, \infty)\}$
- 4) $S = \{(A, 0), (B, 4), (D, 5), (E, 8)\}$
 $T = \{(C, 9), (F, 11)\}$



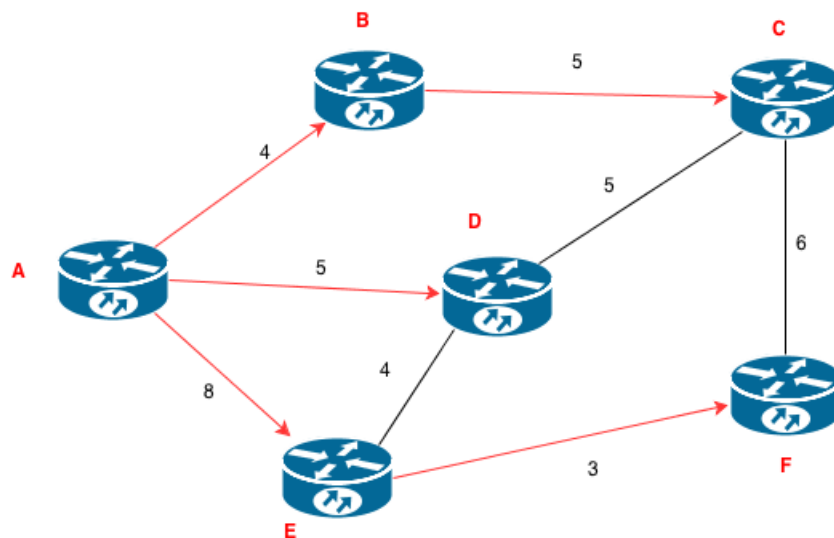
4. Usmjeritelj A --> Usmjeritelj C

- 1) $S = \{(A, 0)\}$
 $T = \{(B, 4), (C, \infty), (D, 5), (E, 8), (F, \infty)\}$
- 2) $S = \{(A, 0), (B, 4)\}$
 $T = \{(C, 9), (D, 5), (E, 8), (F, \infty)\}$
- 3) $S = \{(A, 0), (B, 4), (D, 5)\}$
 $T = \{(C, 9), (E, 8), (F, \infty)\}$
- 4) $S = \{(A, 0), (B, 4), (D, 5), (E, 8)\}$
 $T = \{(C, 9), (F, 11)\}$
- 5) $S = \{(A, 0), (B, 4), (D, 5), (E, 8), (C, 9)\}$
 $T = \{(F, 11)\}$



5. Usmjeritelj A --> Usmjeritelj F

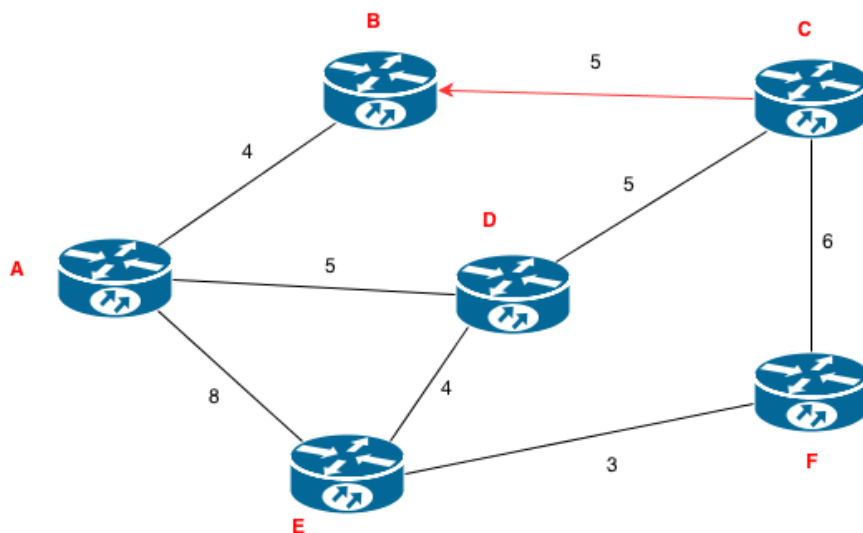
- 1) $S = \{(A, 0)\}$
 $T = \{(B, 4), (C, \infty), (D, 5), (E, 8), (F, \infty)\}$
- 2) $S = \{(A, 0), (B, 4)\}$
 $T = \{(C, 9), (D, 5), (E, 8), (F, \infty)\}$
- 3) $S = \{(A, 0), (B, 4), (D, 5)\}$
 $T = \{(C, 9), (E, 8), (F, \infty)\}$
- 4) $S = \{(A, 0), (B, 4), (D, 5), (E, 8)\}$
 $T = \{(C, 9), (F, 11)\}$
- 5) $S = \{(A, 0), (B, 4), (D, 5), (E, 8), (C, 9)\}$
 $T = \{(F, 11)\}$
- 6) $S = \{(A, 0), (B, 4), (D, 5), (E, 8), (C, 9), (F, 11)\}$
 $T = \{\}$



6. Usmjeritelj C --> Usmjeritelj B

1) $S = \{(C, 0)\}$
 $T = \{(A, \infty), (B, 5), (D, 5), (E, \infty), (F, 6)\}$

2) $S = \{(C, 0), (B, 5)\}$
 $T = \{(A, 9), (D, 5), (E, \infty), (F, 6)\}$

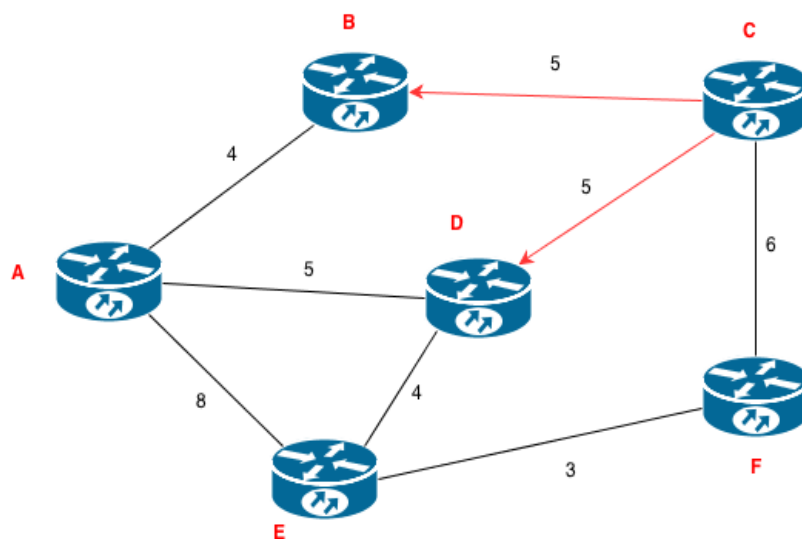


7. Usmjeritelj C --> Usmjeritelj D

1) $S = \{(C, 0)\}$
 $T = \{(A, \infty), (B, 5), (D, 5), (E, \infty), (F, 6)\}$

2) $S = \{(C, 0), (B, 5)\}$
 $T = \{(A, 9), (D, 5), (E, \infty), (F, 6)\}$

3) $S = \{(C, 0), (B, 5), (D, 5)\}$
 $T = \{(A, 9), (E, 9), (F, 6)\}$



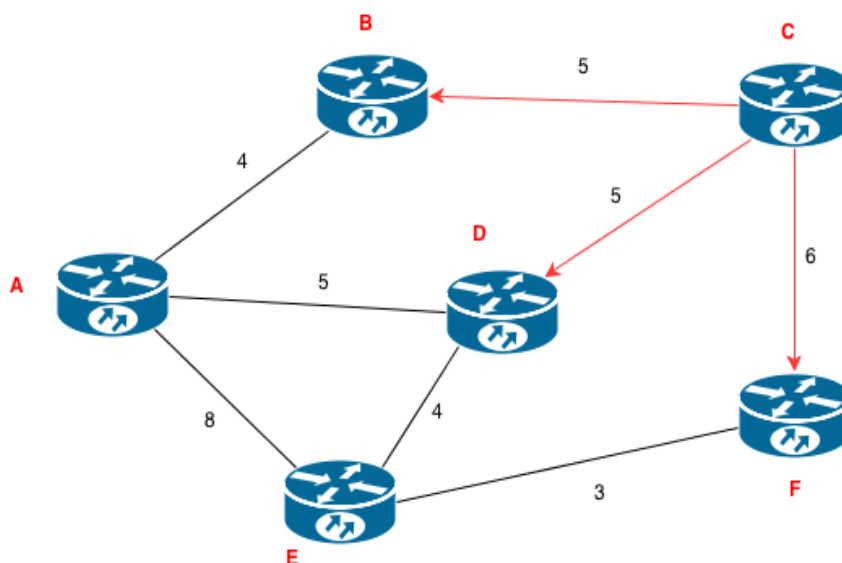
8. Usmjeritelj C --> Usmjeritelj F

1) $S = \{(C, 0)\}$
 $T = \{(A, \infty), (B, 5), (D, 5), (E, \infty), (F, 6)\}$

2) $S = \{(C, 0), (B, 5)\}$
 $T = \{(A, 9), (D, 5), (E, \infty), (F, 6)\}$

3) $S = \{(C, 0), (B, 5), (D, 5)\}$
 $T = \{(A, 9), (E, 9), (F, 6)\}$

4) $S = \{(C, 0), (B, 5), (D, 5), (F, 6)\}$
 $T = \{(A, 9), (E, 9)\}$



9. Usmjeritelj C --> Usmjeritelj A

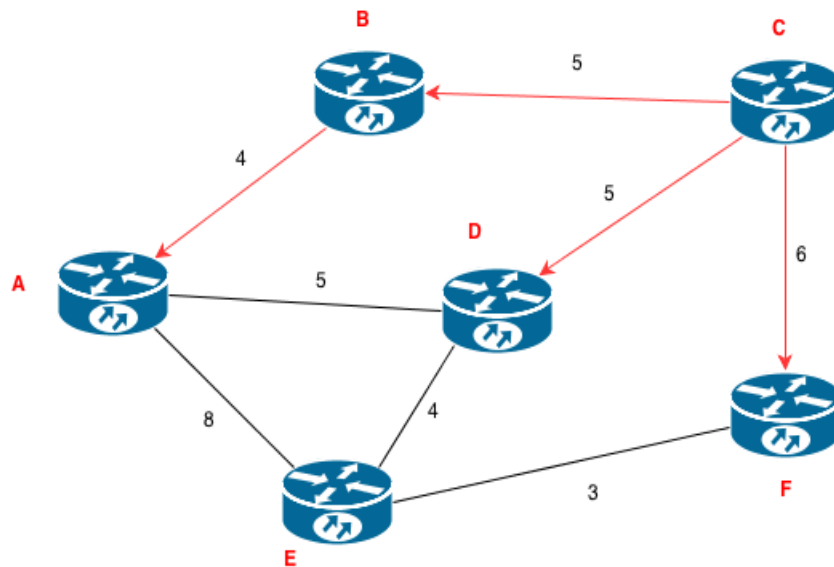
1) $S = \{(C, 0)\}$
 $T = \{(A, \infty), (B, 5), (D, 5), (E, \infty), (F, 6)\}$

2) $S = \{(C, 0), (B, 5)\}$
 $T = \{(A, 9), (D, 5), (E, \infty), (F, 6)\}$

3) $S = \{(C, 0), (B, 5), (D, 5)\}$
 $T = \{(A, 9), (E, 9), (F, 6)\}$

4) $S = \{(C, 0), (B, 5), (D, 5), (F, 6)\}$
 $T = \{(A, 9), (E, 9)\}$

5) $S = \{(C, 0), (B, 5), (D, 5), (F, 6), (A, 9)\}$
 $T = \{(E, 9)\}$



10. Usmjeritelj C --> Usmjeritelj E

- 1) $S = \{(C, 0)\}$
 $T = \{(A, \infty), (B, 5), (D, 5), (E, \infty), (F, 6)\}$
- 2) $S = \{(C, 0), (B, 5)\}$
 $T = \{(A, 9), (D, 5), (E, \infty), (F, 6)\}$
- 3) $S = \{(C, 0), (B, 5), (D, 5)\}$
 $T = \{(A, 9), (E, 9), (F, 6)\}$
- 4) $S = \{(C, 0), (B, 5), (D, 5), (F, 6)\}$
 $T = \{(A, 9), (E, 9)\}$
- 5) $S = \{(C, 0), (B, 5), (D, 5), (F, 6), (A, 9)\}$
 $T = \{(E, 9)\}$
- 6) $S = \{(C, 0), (B, 5), (D, 5), (F, 6), (A, 9), (E, 9)\}$
 $T = \{\}$

