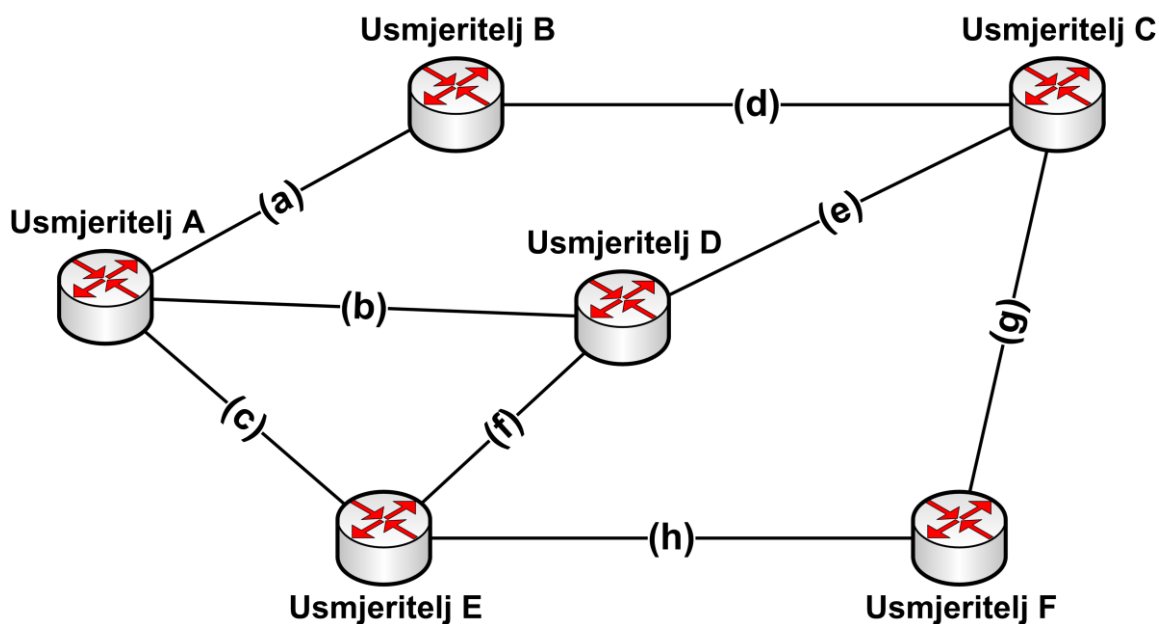


1. domaća zadaća: algoritmi usmjeravanja

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.



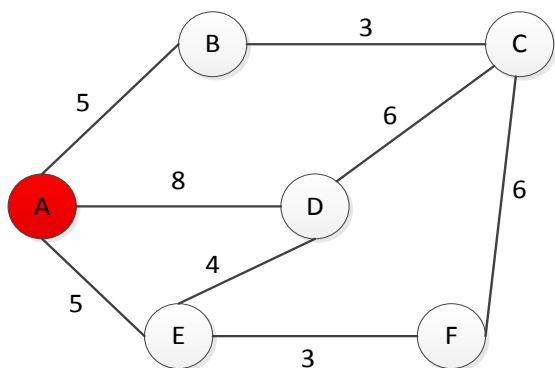
h g f e d c b a

Matični broj (primjer): 0 0 3 6 4 0 5 0 9 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 DOMAĆE ZADAĆE:

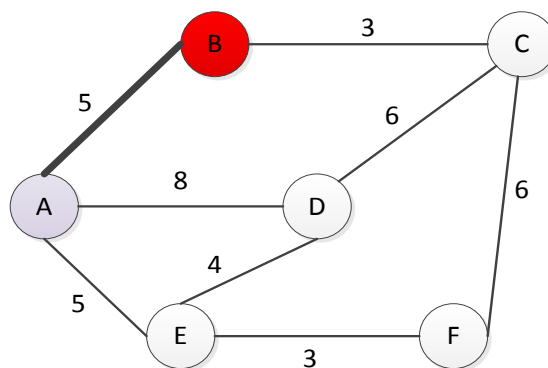
- Najkraći putevi za usmjeritelj A:



Inicijalizacija:

$S = \{(A, 0)\}$

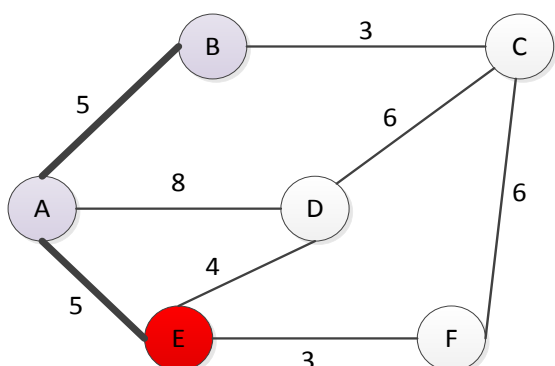
$T = \{(\underline{B}, 5), (C, \infty), (D, 8), (E, 5), (F, \infty)\}$



Korak 1:

$S = \{(A, 0), (\underline{B}, 5)\}$

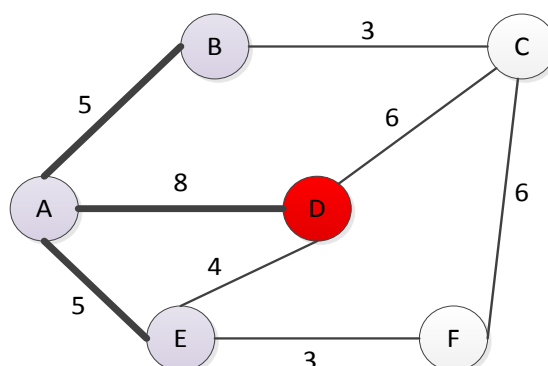
$T = \{(C, 8), (D, 8), (\underline{E}, 5), (F, \infty)\}$



Korak 2:

$S = \{(A, 0), (B, 5), (\underline{E}, 5)\}$

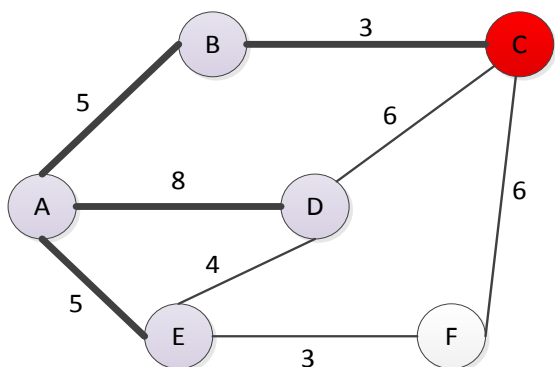
$T = \{(C, 8), (\underline{D}, 8), (F, 8)\}$



Korak 3:

$S = \{(A, 0), (B, 5), (D, 8), (E, 5)\}$

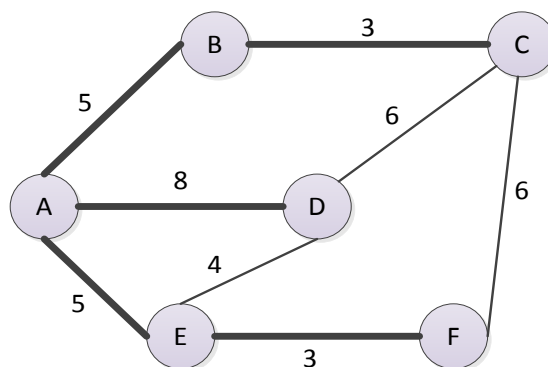
$T = \{(C, 8), (F, 8)\}$



Korak 4:

$S = \{(A, 0), (B, 5), (\underline{C}, 8), (D, 8), (E, 5)\}$

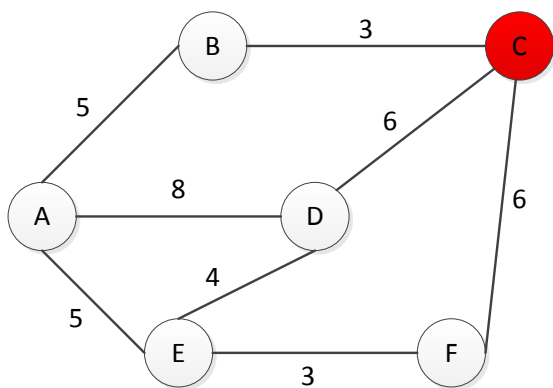
$T = \{(\underline{F}, 8)\}$



Korak 5; kraj.

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

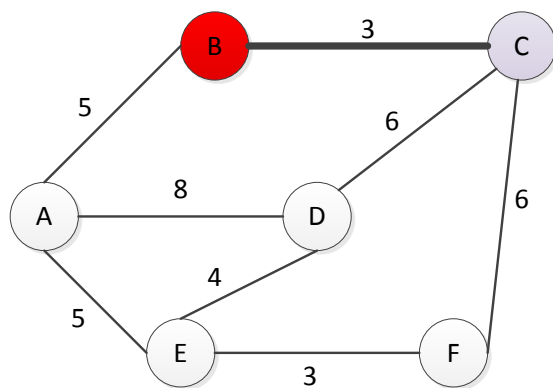
- Najkraći putevi za usmjeritelj C:



Inicijalizacija:

$S = \{(C, 0)\}$

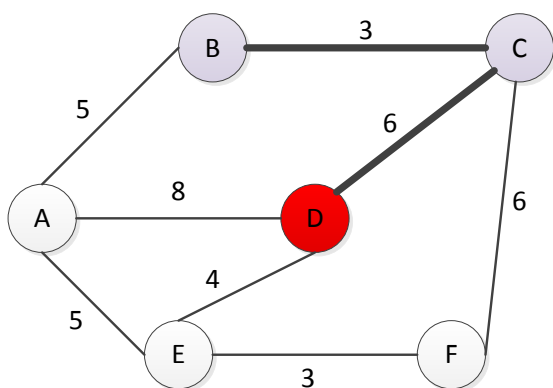
$T = \{(A, \infty), (\underline{B}, 3), (\underline{D}, 6), (E, \infty), (\underline{F}, 6)\}$



Korak 1:

$S = \{(B, 3), (C, 0)\}$

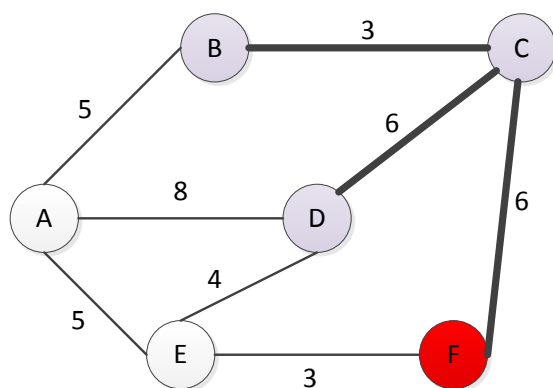
$T = \{(\underline{A}, 8), (D, 6), (E, \infty), (\underline{F}, 6)\}$



Korak 2:

$S = \{(B, 3), (C, 0), (\underline{D}, 6)\}$

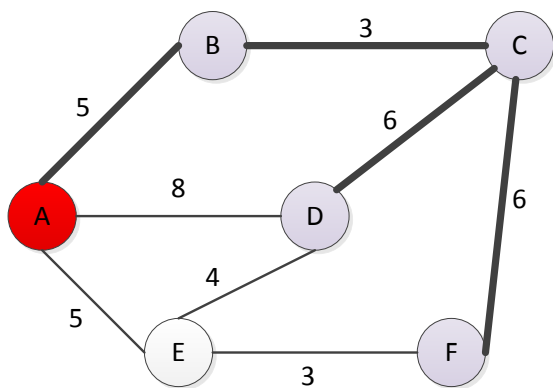
$T = \{(\underline{A}, 8), (\underline{E}, 10), (\underline{F}, 6)\}$



Korak 3:

$S = \{(B, 3), (C, 0), (D, 6), (\underline{F}, 6)\}$

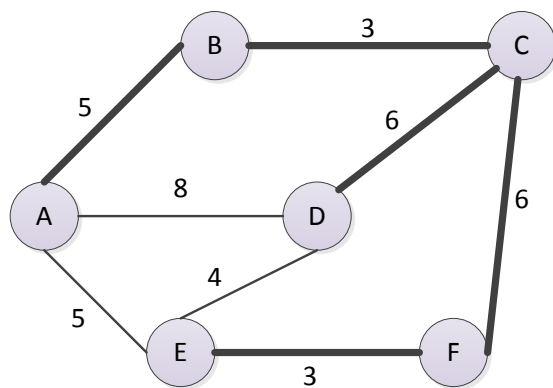
$T = \{(\underline{A}, 8), (\underline{E}, 9)\}$



Korak 4:

$S = \{(\underline{A}, 8), (B, 3), (C, 0), (D, 6), (F, 6)\}$

$T = \{(\underline{E}, 8)\}$



Korak 5; kraj.

$S = \{(A, 8), (B, 3), (C, 0), (D, 6), (E, 8), (F, 6)\}$