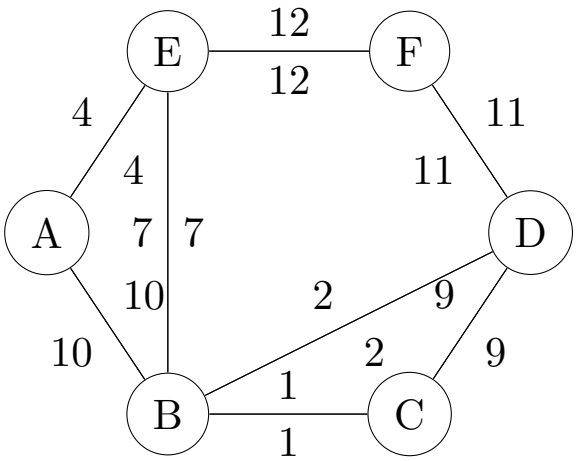
CPS740 - Prova 2

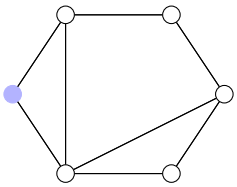
Pedro Maciel Xavier
116023847

20 de setembro de 2020

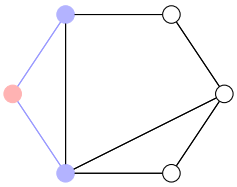
Questão 1.:



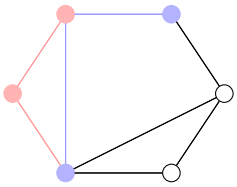
1 .: Algoritmo de *Djkstra*



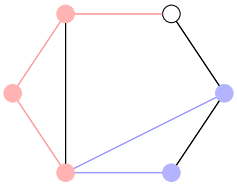
v	$d(u,v)$	$\mathbf{r}[v]$
A	0	A
B	∞	$\emptyset$
C	∞	$\emptyset$
D	∞	$\emptyset$
E	∞	$\emptyset$
F	∞	$\emptyset$



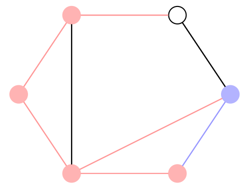
v	$d(u,v)$	$\mathbf{r}[v]$
A	0	A
B	10	A
C	∞	$\emptyset$
D	∞	$\emptyset$
E	4	A
F	∞	$\emptyset$



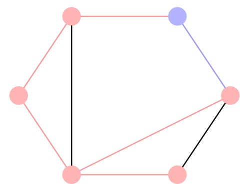
v	$d(u,v)$	$\mathbf{r}[v]$
A	0	A
B	10	A
C	∞	$\emptyset$
D	∞	$\emptyset$
E	4	A
F	16	E



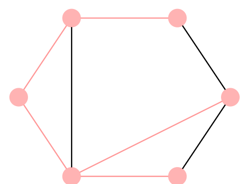
v	$d(u,v)$	$\mathbf{r}[v]$
A	0	A
B	10	A
C	11	B
D	12	B
E	4	A
F	16	E



v	$d(u,v)$	$\mathbf{r}[v]$
A	0	A
B	10	A
C	11	B
D	12	B
E	4	A
F	16	E



v	$d(u,v)$	$\mathbf{r}[v]$
A	0	A
B	10	A
C	11	B
D	12	B
E	4	A
F	16	E



v	$d(u,v)$	$\mathbf{r}[v]$
A	0	A
B	10	A
C	11	B
D	12	B
E	4	A
F	16	E

2 .:

3 .:

4 .: Independentemente do critério de ordenação na busca, uma árvore geradora oriunda de uma busca em largura optaria por atingir o vértice C utilizando-se da aresta (D, C), de custo 9. A árvore de caminho mínimo, no entanto, chegaria ao vértice C através de B, uma vez que o caminho (D, B, C) possui distância total $2 + 1 = 3$.

5 .:

6 .:

Questão 2.:

1 .:

2 .:

3 .:

4 .:

Referências

[1] SZWARCFITER, Jayme Luiz, **Teoria Computacional de Grafos**, 1ª edição, Rio de Janeiro, 2018.