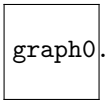
Lab 10: Dijkstra's Algorithm

COMP(CS?) 15

1 Introduction

Today for lab we are going to run Dijkstra's Algorithm on two different graphs. Dijkstra's Algorithm is useful when we want to find the *shortest* and most *cost-effective* path between two vertices. Instead of implementing Dijkstra's algorithm using C++, today we will use pen and paper (or tablet and stylus) to report the results of running the algorithm. Please fill out the table provided as shown in lecture, once you have completed filling out the tables, please submit your work using the usual `provide` command.



V	Known	Prev	Init	v = A	v = B	v = D	v = C	v = F	v = E	v = G
A	~~F~~ T	0	0							
B	~~F~~ T	A	5	5						
C	~~F~~ T	B	7		7					
D	~~F~~ T	B	6		6					
E	~~F~~ T	D	9			9		14		
F	~~F~~ T	C	8				8			
G	~~F~~ T	~~F~~ E	~~12~~ 11					12	11	

graph1.jpg

V	Known	Prev	Init	v = A	v = C	v = B	v = D	v = E	v = F	v = G
A	~~F~~ T	0	0							
B	~~F~~ T	~~A~~ C	~~5~~ 3	5	3					
C	~~F~~ T	A	2	2						
D	~~F~~ T	C	6		6					
E	~~F~~ T	~~C~~ B	~~9~~ 7		9	7				
F	~~F~~ T	~~D~~ E	~~14~~ 10				14	10		
G	~~F~~ T	D	12				12		19	