

Marking Scheme – Subway

1. Correctness (70%)

- a. Input (10%) – Input is read in correctly from the standard input.
- b. Output (10%) – Output is done according to the problem statement.
- c. Correct maximum points (50%):
 - Able to store the initial stations in an appropriate data structure (5%)
 - Able to print the minimum travel time between two stations (15%)
 - Able to build a new station (5%)
 - Able to print all stations' name in the shortest path between two stations (15%)
 - Able to print all station names starting from a given station (10%)

2. Programming Style (30%) – Award this component if they score at least 20% for correctness

a. Meaningful Comments (10%)

- Pre- and Post- conditions (5%)
 - Each method and function must have pre- and post- condition.
 - **Pre- and post- conditions must be correct!**

Deduct marks proportional to the number of methods / functions with them:

- Ignore comments in unused functions
- Ignore comments from skeleton file
- Post-condition should depend on the algorithm
- Pre-condition should also depend on the algorithm
- Other Comments (5%)
 - No other comments at all (deduct 5%)
 - Has very few comments (deduct 2%)

b. Modularity (10%)

- Only main method (deduct 5%)
- Global variables (deduct 5%)
- Improper modifiers (public / private / protected) (deduct 3%)
 - There should be some reason to use public, otherwise attributes and helper methods should be private.

c. Proper Indentation (5%)

- Start each line in column 1 (i.e. no indentation at all): deduct 5%
- Inconsistent indentation for more than 5 lines: deduct 2% - 3%
- Only a few lines are improperly indented (1 to 5 lines): deduct 1%

d. Meaningful Identifiers (5%) [note: for both **variables** and **method** names]

- Use only single character variables and/or methods (besides the one given in the problem statement or for loop counters): deduct 5%
- Some names are not meaningful: deduct 2%

3. Compilation Error: Deduct 50% from total marks obtained.

Note: Provide explanation on why certain marks are deducted in the remarks column. Most importantly, comment on their submission to help them improve their program.