Assignment 4 - LaTeX Write-Up

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December 6, 2024

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1 Introduction

TODO:

2 Directed Graphing

TODO:

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2.1 Parsing & Building

TODO:

```
// Algorithms ~ A.Labouseur, Assignment 4 - Connor Fleischman
#ifndef H_PARSE
#define H_PARSE

#include <iostream>
```

Listing 1: Parsing Implementation

TODO:

```
// Algorithms ~ A.Labouseur, Assignment 4 - Connor Fleischman
#ifndef H_BUILD
#define H_BUILD

#include "./graph/UseGraph.h"
```

Listing 2: Building Implementation

TODO:

```
Building graph #1
Vertex #1 created
Vertex #2 created
Vertex #3 created
Vertex #4 created
Vertex #5 created
Edge created from vertex #2 to #3 with weight: 5
Edge created from vertex #2 to #4 with weight: 8
Edge created from vertex #2 to #5 with weight: -4
Edge created from vertex #3 to #2 with weight: -2
Edge created from vertex #4 to #3 with weight: -3
Edge created from vertex #4 to #5 with weight: 9
Edge created from vertex #5 to #3 with weight: 7
Edge created from vertex #5 to #1 with weight: 2
Edge created from vertex #1 to #2 with weight: 6
Edge created from vertex #1 to #4 with weight: 7
```

2.2 Single Source Shortest Path Algorithm

3 Spices & Knapsacks

TODO:

- TODO:

3.1 Parsing & Building

TODO:

```
// Algorithms ~ A.Labouseur, Assignment 4 - Connor Fleischman
#ifndef H_PARSE
#define H_PARSE

#include <iostream>
```

Listing 3: Parsing Implementation

TODO:

```
// Algorithms ~ A.Labouseur, Assignment 4 - Connor Fleischman
#ifndef H_BUILD
#define H_BUILD

#include "./graph/UseGraph.h"
```

Listing 4: Building Implementation

TODO:

```
Building Spices and Knapsacks
[Constructed] Spice color:     red | totalPrice:   4 | quantity:   4 | unitPrice:   1
[Constructed] Spice color:   green | totalPrice:  12 | quantity:   6 | unitPrice:   2
[Constructed] Spice color:    blue | totalPrice:  40 | quantity:   8 | unitPrice:   5
[Constructed] Spice color:  orange | totalPrice:  18 | quantity:   2 | unitPrice:   9
Spices built
[Constructed] Knapsack with capacity:   1
[Constructed] Knapsack with capacity:   6
[Constructed] Knapsack with capacity:  10
[Constructed] Knapsack with capacity:  20
[Constructed] Knapsack with capacity:  21
Knapsacks built
```

3.2 Fractional Knapsack Algorithm

4 Clean Up

```
Destroying graph #1
-- Edges Deleted --
-- Vertices Deleted --
```

TODO:

```
All Knapsacks filled with Spices
Knapsacks destroyed
Spices destroyed
```

TODO: