

Advanced Data Structures & Algorithms

Software Year 3

CA3

Project Report

[Student Name]

[Student Number]

[Date of Submission]

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# Introduction

Replace this text with an appropriate Project Introduction.

Start with this report was commissioned by Áine Byrne, lecturer Advanced Data Structures & Algorithms as submission for assessment for this module.

Introduce the project application, and a summary of the contents of the report.

What is covered in the report? What Data structure did you use .. what language did you program in ?

Keep this section short!

# Part 1: Heap Application

## Section 1: Description of the Application

Replace this text with an appropriate Description of Application.

This section should introduce the problem domain.. is it Max/Min heap etc..

## Section 2: Data Structures Used

Replace this text with an appropriate Data Structures.

Short description of Data Structures used, including helper variables. Include drawings of the data structures and names used for these structures.

## Section 3: Pseudocode of operations:

Replace this text with an appropriate Pseudo Code.

Pseudocode of each of the methods used

Insert (x): adds a number x unto the heap

FindParent(x) : returns the parent of node stored at position x

FindChild(x): returns the children of a node stored at position x

DeleteSmall/DeleteBig(H) : deletes the smallest/largest value stored in the Min/Max heap.

## Section 4: Demo using example

Replace this text with demonstration of your application and operations using an example of your choice.

# Part 2: General Tree Application

## Section 1: Description of the Application

Replace this text with an appropriate Description of Application.

This section should introduce the problem domain- Game Tree

## Section 2: Data Structures Used

Replace this text with an appropriate Data Structures.

Short description of Data Structures used, including helper variables. Include drawings of the data structures and names used for these structures.

## Section 3: Pseudocode of operations:

Replace this text with an appropriate Pseudo Code.

Pseudocode of each of the methods used

FindParent(x) : returns the parent of node x

FindChild(x): returns the children of a node x

FindSiblings(x): returns the siblings of a node x

## Section 4: Demo using example

Replace this text with demonstration of your application and operations using your game example.

# Part 3:

## Section 5: Description of methods used

Replace this text with description of methods used.

One line description for each method used in code.

## Section 6: Test data Used

Replace this text with Test Data.

Test data is the input given to the program during test execution. Include in this section a diagram of the structure used, a description of the test data used, and a copy (or screenshot) of the test file( if appropriate).

## Section 7: Sample execution

Replace this text with Sample execution screenshots.

Include screen shots of your application running on the test data described above. Demonstrate via screenshots, how each option on the menu runs. Ensure that screenshots are neat, readable and cropped to correct size.

## Section 8: Copy of Code

Replace this text with a copy of Code.

Include a copy of Code either by including the code file or screenshots of the code.

## Section 9: Conclusion

# References

Include Acknowledge Describe Evidence Form (if appropriate)