Module Reflection

This module has taught me a lot about trees such as Red Black trees, B Trees and B+ trees. I was also able to refresh my memory on binary search trees and AVL trees. This module is important as it relates to efficient data management in software development. However, I used external resources to learn as well. I think the topic could have been better explained if the tutors went through examples step by step instead of annotating over lecture slides, for example, I didn't quite understand the red-black and had to use Youtube to extend my knowledge. I highly recommend StudyKorner as they post good videos on trees.

Code Reflection

I used some of the code given in the module resources. However, I had to create a new program file as it was hard to code over the original. I also had to change some functions a bit as I could not get the program to work properly when I was adding new functions such as the rotations. For the rotations I turned to online forums and websites for help. Overall, this code was personally quite difficult as my code kept going wrong and I had to repeatedly backtrack and fix it.
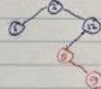
RB Trees

R.B Tree

1. Insert 2

2. Insert 1

3. Insert 12
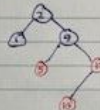
4. Insert 5

5. Change colours

6. Insert 9

7. Rotate and change colours

8. Insert 10

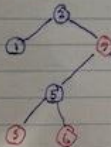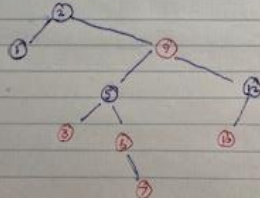9. Change colours

10. Insert 3

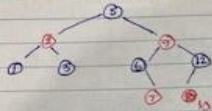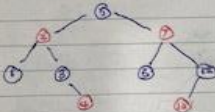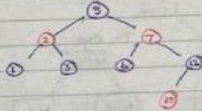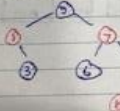11. Insert 6

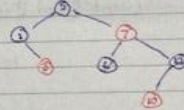12. Insert 7

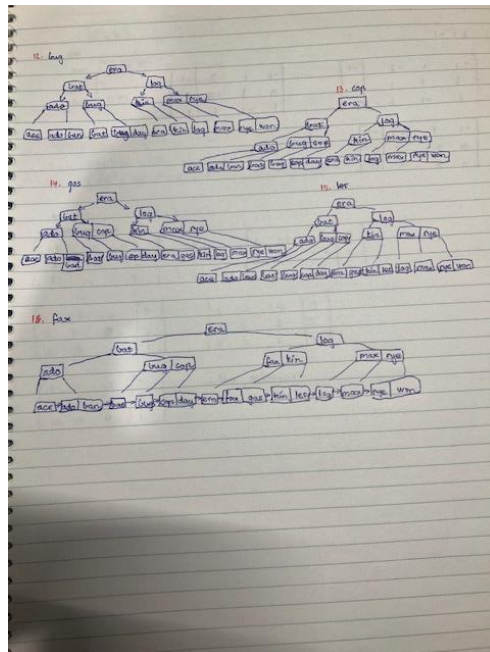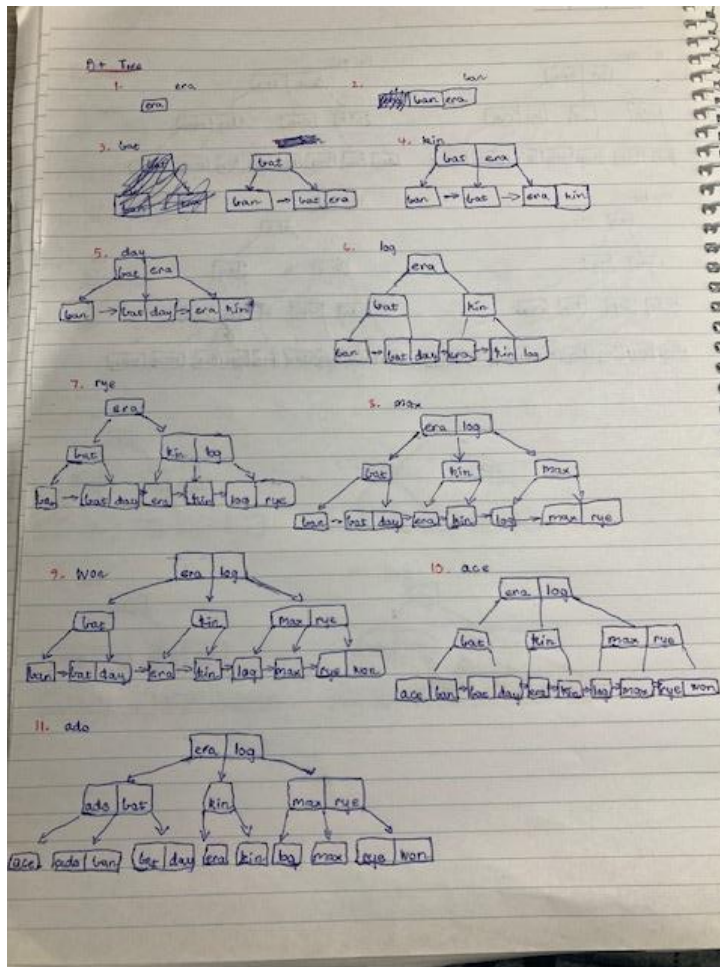13. Rotate and Change colours

14. Insert 4

15. Delete 9

16. Delete 4

17. Delete 2

18. Change colours

B+ Trees

B Trees

B Tree

1. era
| era |

2. ban
| ban | era |

3. bat
| bat |
| ban | era |

4. kin
| bat |
| ban | era | kin |

5. day
| bat | era |
| ban | day | kin |

6. log
| bat | era |
| ban | day | kin | log |

7. rye
| era |
| bat | log |
| ban | day | kin | rye |

8. max
| era |
| bat | log |
| ban | day | kin | max | rye |

9. won
| era |
| bat | log | rye |
| ban | day | kin | max | won |

10. ace
| era |
| bat | log | rye |
| ace | ban | day | kin | max | won |

11. ado
| era |
| ado | bat | log | rye |
| ace | ban | day | kin | max | won |

12. bug
| era |
| ado | bat | log | rye |
| ace | ban | bug | day | kin | max | won |

13. cop
bat	era
ado	cop	log	rye
ace	ban	bug	day	kin	max	won

14. gas
bat	era
ado	cop	log	rye
ace	ban	bug	day	gas	kin	max	won

15. let
| era |
bat	log
ado	cop	kin	rye
ace	ban	bug	day	gas	let	max	won

16. fax
| era |
bat	log
ado	cop	kin	rye
ace	ban	bug	day	fax	gas	let	max	won