

COMP251 - Lab4- Practice questions- (not for marking)

The followings are about queue and stack and practice questions only. They will not be marked.

1. Consider the following mystery method. Trace it for `mystery("01101", 4)` ; try to draw a tree of all function calls (you do not need to submit the tree, just briefly explain it and write the final result of calling `mystery("01101", 4)` . Give a high-level description of what the method does.

```
int mystery(String s, int last) {
    if (last < 0)
        return 0;
    if (s.charAt(last) == '0')
        return 2 * mystery(s, last-1);
    return 1 + 2 * mystery(s, last-1);
}
```

2. Write a recursive function convert a decimal number into a binary number, printing the binary number (You can write a pseudocode, but make sure there is no bug and you consider all special cases).

```
public static void decToBin(int num){
    // Your code
}
```