

## LOVELACE QUIZ 13th MAY 2021

Time (1 hour)

1. A car is represented by a data class with these attributes: make, model and color. Write a function that groups a list of cars by color using a when statement. The available color groups are red, blue and other. The function should print out each list of cars under each color group (3pts)
2. Write a function that takes in a String and returns its length (2 pts)
3. Create a class `CurrentAccount` with the following attributes: account number, account name, balance. It has the following functions:
  - a. `deposit(amount: Double)` - Increments the balance by the amount deposited
  - b. `withdraw(amount: Double)` - Decrements the balance by the amount withdrawn
  - c. `details()` - Prints out the account number and balance and name in this format: "Account number x with balance y is operated by z" (5pts)
4. Create another class `SavingsAccount`. It has the same functions and attributes as the current account except for one attribute, `withdrawals: Int`. Withdrawals is a counter variable that is used to keep track of how many withdrawals have been made from the account in a year. The only other difference is that the savings account `withdraw()` method first checks if the number of withdrawals is less than 4 for it to allow one to withdraw money from the account. It also increments the withdrawals attribute after a successful withdrawal (5pts)