## 1.(a)

Here the mod of integer is taken. If It is zero then it is even. or else odd.

## 1 (b)

Using split function and making a list we can retrieve operators and integers. Using if else we can determine whether the operator is $+, -, *, /$.

## 2.

The given bubble sort code has time Complexity of $\theta(n^2)$. In best case scenario, the input is sorted in ascending order, so to get $\theta(n)$, we need to first check if the given input is already sorted or not. If it is sorted, we use flag to stop it from going to bubble sort nested loop algorithm.

## 3

~~for~~

to sort the marks and ID we need to use selection sort for least number of sorting. Here, the max value is found and ~~replaced~~ it is put in descending index numbers.

## 4

Here, place and time of the train's departure is added separately in two different lists. Using bubble sort, we can sort the input in ascending order.