



In this homework, you will develop a python program which reads a series of barcodes from "barcodes.txt" and creates an output file "output.txt" which contains the barcodes and their status as seen in the example output below.



**Even :**  $2 + 6 + 1 + 5 + 0 = 14$   
**Odd:**  $1 + 3 + 0 + 0 + 7 + 7 = 18$   
 $3 \times 8 = 24$   
 $4 + 4 = 8$   
 $10 - 8 = 2$  **(CORRECT)**

### What to submit:

- 1) ipynb file which contains **checkBarcode** function which takes a string variable as input and returns true or false, and a driver program which reads in "barcodes.txt" and creates "output.txt". Assume the input file contains one barcode info per line.

**Important:** Your input file name MUST BE "barcodes.txt" and the output file name MUST BE "output.txt". Otherwise, you'll get up to -100 pts penalty

Below a sample **output.txt**:

123601057072 is a valid 10-digits barcode  
 1ab601057072 is an invalid 10-digits barcode  
 172601055072 is an invalid 10-digits barcode  
 12345 is an invalid 10-digits barcode  
 753182953427 is a valid 10-digits barcode  
 <...etc...>

### Penalties :

- late submission, cheating and non-working code: up to -100pts
- improper commenting : up to -20pts
- not using a function : up to -50pts
- no driver program : up to -50pts
- improper coding style: up to -10pts (like, variable names and indents)
- improper input/output file names : up to -100pts
- program does not work for some-all of the sample input file : up to -100pts
-