## PROGRAMMING

Solve the 2 problems below in your chosen programming language (preferably Java). You don't have to get the result calculated by hand instead you are required to write a code or simply pseudo-code that solves the problem.

### Problem 1

If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3,5,6,9. The sum of these multiples is 23.
Find the sum of all the multiples of 5 or 7 below 2500.

### Problem 2

Duncan sequence is the sum of the previous 3 number as follow :

$$S_n = S_{n-3} + S_{n-2} + S_{n-1}$$

The first 6 numbers in the sequence is:  5 2 3 10 15 28 ...

Find the $S_{1000}$

## STRUCTRUED QUERY LANGUAGE (SQL)

### Problem 3

When I delete the data from a table, I got an error message "Foreign Key Constraint Violation". How should I overcome this problem ?

**M_VESSEL**

| VESSEL_ID | NAME | VTYPE_ID (Foreign key to M_VESSEL_TYPE) | VCLASS_ID (Foreign key to M_VESSEL_CLASS) |
|---|---|---|---|
| 1 | Lusitania Espresso | 1 | 2 |
| 2 | San Salvador | 2 | 3 |
| 3 | Tegucigalpa | 3 | NULL |
| 4 | Curacao | 2 | 2 |

**M_VESSEL_TYPE**

| VTYPE_ID | NAME | SHORTNAME |
|---|---|---|
| 1 | Bulk Carrier | BLKC |
| 2 | Freighter | FREG |
| 3 | Very Large Crude Carrier | VLCC |

**M_VESSEL_CLASS**

| VC_ID | NAME |
|---|---|
| 1 | Panamax |
| 2 | Suezmax |
| 3 | Malaccamax |

### Problem 4

Write SQL Query to get the list containing : vessel id, vessel name, vessel type name, vessel class name

### Problem 5

Write SQL Query to get the list containing of vessel name of class "SUEZMAX" that the vessel type short name is "FREG"

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