

## CSC2402 Assignment 2

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Output Screenshots:

### Question 1

Error processing

```
Would you like to reserve another seat? Enter Y/y for yes or N/n for no: y
Please enter the ticket type: F/f for First Class, B/b for Business Class or E/e for Economy Class. f
Please select the row you would like, 1 or 2. 1

Please enter the seat number you would like A - F. B

This seat is already occupied, please try again

  A B C  D E F
Row 1  X X *  * * *
Row 2  * X X  * * *
Row 3  * * *  X X X
Row 4  * * *  * * *
Row 5  X * *  * * *
Row 6  X * *  * * *
Row 7  X * *  * * *
Row 8  * * *  * * *
Row 9  * * *  * * *
Row 10 * * *  * * *
Row 11 * * *  * * *
Row 12 * * *  * * *
Row 13 X X X  X X X
* -- Available seat
X -- Occupied seat

Please select the row you would like, 1 or 2. █
```

## Final layout

This program assigns seats for a commercial airplane.  
The current seat availability is as follows:

		A	B	C	D	E	F
Row	1	X	X	*	*	*	*
Row	2	*	X	X	*	*	*
Row	3	*	*	*	X	X	X
Row	4	*	*	*	*	*	*
Row	5	X	*	*	*	*	*
Row	6	X	*	*	*	*	*
Row	7	X	*	*	*	*	*
Row	8	*	*	*	*	*	*
Row	9	*	*	*	*	*	*
Row	10	*	*	*	*	*	*
Row	11	*	*	*	*	*	*
Row	12	*	*	*	*	*	*
Row	13	X	X	X	X	X	X

\* -- Available seat  
X -- Occupied seat

Rows 1 and 2 are for first class passengers.  
Rows 3 through 7 are for business class passengers.  
Rows 8 through 13 are for economy class passengers.

## Question 2

Input of 20 Numbers

```
Please enter 20 numbers to be stored in the first array:  
1  
2  
3  
4  
1  
2  
3  
4  
1  
2  
3  
4  
1  
2  
3  
4  
1  
2  
3  
4
```

Alpha, Beta and double matrix

```
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3  
4 1 2 3 4  
  
2 4 6 8 2 4 6 8 2 4 6 8 2 4 6  
8 2 4 6 8  
  
1234  
1234  
1234  
1234  
1234  
2468  
2468  
2468  
2468  
2468
```

## Question 3

```

Print the roman representation of the values
I
XXIV
XXXIII

Default romanType constructor with no parameter
The default romanType variable as a Roman Numeral = I
The default romanType variable as a integer value = 1

Setting the default romanType value to 44
The default romanType variable as a Roman Numeral = XLIV
The default romanType variable as a Roman Numeral = 44

Get roman numeral and integer using the string constructor
The string constructor romanType variable as a Roman Numeral = XXIV
The string constructor romanType variable as a integer value = 24

Get roman numeral and integer using the integer constructor
The integer constructor romanType variable as a Roman Numeral = XXXIII
The integer constructor romanType variable as a integer value = 33

Test the Increment and Decrement methods
Roman Value before calling the Increment method = XXXIII
The Roman value after calling the Increment method = XXXIV
Now the value after calling the Decrement method = XXXIII

Adding 2 romanTypes using top level function
XXIV + XXXIII = LVII

Adding romanType and integer using top level function
XXIV + 259 = CCLXXXIII

Using the class method for addition of romanType values
XXIV + XXXIII = LVII

Using the overloaded class method for addition of romanType and integer values
XXXIII + 116 = CXLIX

The times table of VI to a multiple of XII is shown below.
I      *    VI    =    VI
II     *    VI    =    XII
III    *    VI    =    XVIII
IV     *    VI    =    XXIV
V      *    VI    =    XXX
VI     *    VI    =    XXXVI
VII    *    VI    =    XLII
VIII   *    VI    =    XLVIII
IX     *    VI    =    LIV
X      *    VI    =    LX
XI     *    VI    =    LXVI
XII    *    VI    =    LXXII

```