Practice Exercise #05: NRIC Check Code

http://www.comp.nus.edu.sg/~cs1010/4_misc/practice.html

Reference: Week 3, Exercise #7

Date of release: 25 August 2014

Objective: Selection statement (switch)

Task statement:

Write a program **NRIC.c** to read a 7-digit positive integer representing an NRIC number and generate its check code.

The algorithm for generating NRIC check code is illustrated with the example of NRIC number **8730215**.

Step 1: Multiply the digits with their corresponding weights 2, 7, 6, 5, 4, 3, 2 and add the products. Example: 8×2 + 7×7 + 3×6 + 0×5 + 2×4 + 1×3 + 5×2 = 104

Step 2: Divide step 1 result by 11 to obtain the remainder. Example: 104 % 11 = 5

Step 3: Subtract step 2 result from 11. Example: 11 – 5 = 6

Step 4: Match step 3 result in this table for the check code.

Step 3 result	1	2	3	4	5	6	7	8	9	10	11
Check code	A	B	C	D	E	F	G	H	I	Z	J

Example: The check code corresponding to 6 is 'F'.

Your program should include a function `char generateCode(int)` that takes in a single integer (the NRIC number) and returns a character (the check code of that NRIC number).

As character is not yet covered, you need to explore the **char** type on your own. A character constant is enclosed in single quotes (example: 'A', 'Z'). The format specifier in a **printf()** statement for a **char** value is **%c**.

Note: Do not use techniques not covered in class yet, such as array. Your program may be long now; you can write an improved version later when you learn array.

Sample run:

```
Enter 7-digit NRIC number: 8730215
Check code is F
```