

## Practice S02P03: NRIC Check Code

[http://www.comp.nus.edu.sg/~cs1010/4\\_misc/practice.html](http://www.comp.nus.edu.sg/~cs1010/4_misc/practice.html)

**Week of release:** Week 4

**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:  $8 \times 2 + 7 \times 7 + 3 \times 6 + 0 \times 5 + 2 \times 4 + 1 \times 3 + 5 \times 2 = 104$

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
```