

Your Task

In this exercise, you are to write a program **ucard.c** to read in a positive number (of type **int**), and perform the following tasks:

- Generate the check number using the Luhn-ah algorithm described above.
- Based on the check number produced at the last step of the algorithm, print one of the following two messages:
 - If the check number is a multiple of 7, the message is “Valid”
 - If the check number is not a multiple of 7, the message is “Invalid”
- If the number is valid, continue to determine the branch that issued the card, and print the message “Issued by *X* branch”, where *X* can either be “East”, “West” or “Central”. If the number is invalid, there is no need to do anything at this stage.

You may assume that the input is a positive integer smaller than the maximum integer defined for **int** type.

Four sample runs are shown below, with user inputs shown in **bold**.

```
Enter uCard Number: 323456789
The check number is 49
Valid
Issued by East branch
```

```
Enter uCard Number: 55010011
The check number is 10
Invalid
```

```
Enter uCard Number: 54123656
The check number is 28
Valid
Issued by West branch
```

```
Enter uCard Number: 45223
The check number is 14
Valid
Issued by Central branch
```

Your program **MUST HAVE** a function called **luhnah()** that performs the Luhn-ah algorithm and returns the check number, and a function called **issued()** that prints the issuing branch. You may choose to define additional functions to help in the computation.

Skeleton Program:

A skeleton program **ucard.c** is available in your plab account and is shown below.

```
// CS1010 AY2012/3 Semester 1
// PE1 Ex2: ucard.c
// Name:
// Matriculation number:
// plab account-id:
// Discussion group:
// Description:

int main(void) {
    int uCardNo;

    printf("Enter uCard Number: ");

    return 0;
}
```