Algorithm for the simulation

1. Ask user for credit card number
2. Check whether the credit card number is between 13 and 16 digits
3. Check with what number the credit card number begins:
4. 4 for Visa cards
5. 5 for Master cards
6. 37 for American Express cards
7. 6 for Discover cards
8. Double every second digit from right to left. If doubling of a digit results in a two-digit number, add up the two digits to get a single-digit number.
9. Now add all single-digit numbers from Step 4.
10. Add all digits in the odd places from right to left in the card number.
11. Sum the results from Step 5 and Step 6.
12. If the result in Step 7 is divisible by 10, the card number is correct. Otherwise, the number is invalid.