Screenshot 1:

```
22          digit -= 9;
23      }
24  }
25
26  sum += digit;
27  }
28
29  return sum % 10 == 0;
30  }
31
32  int main() {
33      char cardNumber[17];
34
35      printf("Masukkan nomor kartu: ");
36      scanf("%s", cardNumber);
37
38      if (isValidCardNumber(cardNumber))
39      {
40
41          if (cardNumber[0] == '4') {
42              printf("Nomor kartu anda: %s\n", cardNumber);
43              printf("Tipe kartu anda: VISA\n");
44          } else if (strncmp(cardNumber, "51", 2) == 0 || strncmp(cardNumber, "52", 2) == 0 ||
45                     strncmp(cardNumber, "53", 2) == 0 || strncmp(cardNumber, "54", 2) == 0 ||
46                     strncmp(cardNumber, "55", 2) == 0) {
47              printf("Nomor kartu anda: %s\n", cardNumber);
48              printf("Tipe kartu anda: MASTERCARD\n");
49          } else {
50              printf("Nomor kartu anda: %s\n", cardNumber);
51              printf("Tipe kartu anda: TIDAK DIKETAHUI\n");
52          }
53
```

```
Masukkan nomor kartu: 2221000000000009
Nomor kartu anda: 2221000000000009
Tipe kartu anda: TIDAK VALID

...Program finished with exit code 0
Press ENTER to exit console.
```

Screenshot 2:

```
22          digit -= 9;
23      }
24  }
25
26  sum += digit;
27  }
28
29  return sum % 10 == 0;
30  }
31
32  int main() {
33      char cardNumber[17];
34
35      printf("Masukkan nomor kartu: ");
36      scanf("%s", cardNumber);
37
38      if (isValidCardNumber(cardNumber))
39      {
40
41          if (cardNumber[0] == '4') {
42              printf("Nomor kartu anda: %s\n", cardNumber);
43              printf("Tipe kartu anda: VISA\n");
44          } else if (strncmp(cardNumber, "51", 2) == 0 || strncmp(cardNumber, "52", 2) == 0 ||
45                     strncmp(cardNumber, "53", 2) == 0 || strncmp(cardNumber, "54", 2) == 0 ||
46                     strncmp(cardNumber, "55", 2) == 0) {
47              printf("Nomor kartu anda: %s\n", cardNumber);
48              printf("Tipe kartu anda: MASTERCARD\n");
49          } else {
50              printf("Nomor kartu anda: %s\n", cardNumber);
51              printf("Tipe kartu anda: TIDAK DIKETAHUI\n");
52          }
53
```

```
Masukkan nomor kartu: 4222222222222
Nomor kartu anda: 4222222222222
Tipe kartu anda: VISA

...Program finished with exit code 0
Press ENTER to exit console.
```

```cpp
    cin >> cardNumber;

    if (isValidCardNumber(cardNumber)) {

        if (cardNumber[0] == '4') {
            cout << "Nomor kartu anda: " << cardNumber << endl;
            cout << "Tipe kartu anda: VISA" << endl;
        } else if (cardNumber.substr(0, 2) == "51" || cardNumber.substr(0, 2) == "52" ||
                   cardNumber.substr(0, 2) == "53" || cardNumber.substr(0, 2) == "54" ||
                   cardNumber.substr(0, 2) == "55") {
            cout << "Nomor kartu anda: " << cardNumber << endl;
            cout << "Tipe kartu anda: MASTERCARD" << endl;
        } else {
            cout << "Nomor kartu anda: " << cardNumber << endl;
            cout << "Tipe kartu anda: TIDAK DIKETAHUI" << endl;
        }


        int checksum = 0;
        for (int i = 0; i < cardNumber.length(); i++) {
            checksum += cardNumber[i] - '0';
        }

    } else {
        cout << "Nomor kartu anda: " << cardNumber << endl;
        cout << "Tipe kartu anda: TIDAK VALID" << endl;
    }

    return 0;
}
```

```
Masukkan nomor kartu: 2221000000000009
Nomor kartu anda: 2221000000000009
Tipe kartu anda: TIDAK VALID

...Program finished with exit code 0
Press ENTER to exit console.
```

```cpp
    cin >> cardNumber;

    if (isValidCardNumber(cardNumber)) {

        if (cardNumber[0] == '4') {
            cout << "Nomor kartu anda: " << cardNumber << endl;
            cout << "Tipe kartu anda: VISA" << endl;
        } else if (cardNumber.substr(0, 2) == "51" || cardNumber.substr(0, 2) == "52" ||
                   cardNumber.substr(0, 2) == "53" || cardNumber.substr(0, 2) == "54" ||
                   cardNumber.substr(0, 2) == "55") {
            cout << "Nomor kartu anda: " << cardNumber << endl;
            cout << "Tipe kartu anda: MASTERCARD" << endl;
        } else {
            cout << "Nomor kartu anda: " << cardNumber << endl;
            cout << "Tipe kartu anda: TIDAK DIKETAHUI" << endl;
        }


        int checksum = 0;
        for (int i = 0; i < cardNumber.length(); i++) {
            checksum += cardNumber[i] - '0';
        }

    } else {
        cout << "Nomor kartu anda: " << cardNumber << endl;
        cout << "Tipe kartu anda: TIDAK VALID" << endl;
    }

    return 0;
}
```

```
Masukkan nomor kartu: 4222222222222
Nomor kartu anda: 4222222222222
Tipe kartu anda: VISA

...Program finished with exit code 0
Press ENTER to exit console.
```

main.cpp — C++

```cpp
37        cin >> cardNumber;
38
39        if (isValidCardNumber(cardNumber)) {
40
41            if (cardNumber[0] == '4') {
42                cout << "Nomor kartu anda: " << cardNumber << endl;
43                cout << "Tipe kartu anda: VISA" << endl;
44            } else if (cardNumber.substr(0, 2) == "51" || cardNumber.substr(0, 2) == "52" ||
45                       cardNumber.substr(0, 2) == "53" || cardNumber.substr(0, 2) == "54" ||
46                       cardNumber.substr(0, 2) == "55") {
47                cout << "Nomor kartu anda: " << cardNumber << endl;
48                cout << "Tipe kartu anda: MASTERCARD" << endl;
49            } else {
50                cout << "Nomor kartu anda: " << cardNumber << endl;
51                cout << "Tipe kartu anda: TIDAK DIKETAHUI" << endl;
52            }
53
54
55            int checksum = 0;
56            for (int i = 0; i < cardNumber.length(); i++) {
57                checksum += cardNumber[i] - '0';
58            }
59
60        } else {
61            cout << "Nomor kartu anda: " << cardNumber << endl;
62            cout << "Tipe kartu anda: TIDAK VALID" << endl;
63        }
64
65        return 0;
66    }
67
68
```

```
Masukkan nomor kartu: 5555555555554444
Nomor kartu anda: 5555555555554444
Tipe kartu anda: MASTERCARD

...Program finished with exit code 0
Press ENTER to exit console.
```

main.c — C

```c
22            digit -= 9;
23        }
24    }
25
26    sum += digit;
27    }
28
29    return sum % 10 == 0;
30 }
31
32 int main() {
33     char cardNumber[17];
34
35     printf("Masukkan nomor kartu: ");
36     scanf("%s", cardNumber);
37
38     if (isValidCardNumber(cardNumber))
39     {
40
41        if (cardNumber[0] == '4') {
42            printf("Nomor kartu anda: %s\n", cardNumber);
43            printf("Tipe kartu anda: VISA\n");
44        } else if (strncmp(cardNumber, "51", 2) == 0 || strncmp(cardNumber, "52", 2) == 0 ||
45                   strncmp(cardNumber, "53", 2) == 0 || strncmp(cardNumber, "54", 2) == 0 ||
46                   strncmp(cardNumber, "55", 2) == 0) {
47            printf("Nomor kartu anda: %s\n", cardNumber);
48            printf("Tipe kartu anda: MASTERCARD\n");
49        } else {
50            printf("Nomor kartu anda: %s\n", cardNumber);
51            printf("Tipe kartu anda: TIDAK DIKETAHUI\n");
52        }
```

```
Masukkan nomor kartu: 5555555555554444
Nomor kartu anda: 5555555555554444
Tipe kartu anda: MASTERCARD

...Program finished with exit code 0
Press ENTER to exit console.
```

```c
(program C
#include <iostream>
#include <string>
using namespace std;
bool isValidCardNumber(string cardNumber) {
if (cardNumber.length() != 16 && cardNumber.length() != 13) {
return false;
}
int sum = 0;
for (int i = cardNumber.length() - 1; i >= 0; i--) {
 int digit = cardNumber[i] - '0';
if (i % 2 != 0)
{
digit *= 2;
if (digit > 9)
{
digit -= 9;
}
}
sum += digit;
}
return sum % 10 == 0;
}
int main()
{
string cardNumber;
cout << "Masukkan nomor kartu: ";
cin >> cardNumber;
if (isValidCardNumber(cardNumber)) {
if (cardNumber[0] == '4')
{
cout << "Nomor kartu anda: " << cardNumber << endl;
cout << "Tipe kartu anda: VISA" << endl;
}
else if (cardNumber.substr(0, 2) == "51" || cardNumber.substr(0, 2) == "52" ||

        cardNumber.substr(0, 2) == "53" || cardNumber.substr(0, 2) == "54" ||

        cardNumber.substr(0, 2) == "55")
{
cout << "Nomor kartu anda: " << cardNumber << endl;
cout << "Tipe kartu anda: MASTERCARD" << endl;
}
else
{
```

```cpp
cout << "Nomor kartu anda: " << cardNumber << endl;
cout << "Tipe kartu anda: TIDAK DIKETAHUI" << endl;
}
int checksum = 0;
for (int i = 0; i < cardNumber.length(); i++)
{
checksum += cardNumber[i] - '0';
}
}
else
{
cout << "Nomor kartu anda: " << cardNumber << endl;
cout << "Tipe kartu anda: TIDAK VALID" << endl
}
return 0;
}
```

(Program menggunakan Bahasa C++)

```cpp
#include <stdio.h>
#include <string.h>
int isValidCardNumber(char *cardNumber) {
(strlen(cardNumber) != 16 && strlen(cardNumber) != 13) {
return 0;
}
int sum = 0;
int length = strlen(cardNumber);
for (int i = length - 1; i >= 0; i--) {
int digit = cardNumber[i] - '0';
if (i % 2 != 0) {
digit *= 2;
if (digit > 9) {
digit -= 9;
}
}
sum += digit;
}
return sum % 10 == 0
}
int main()
char cardNumber[17];
printf("Masukkan nomor kartu: ");
scanf("%s", cardNumber);
if (isValidCardNumber(cardNumber))
```

```c
{
if (cardNumber[0] == '4') {
printf("Nomor kartu anda: %s\n", cardNumber);
printf("Tipe kartu anda: VISA\n");
} else if (strncmp(cardNumber, "51", 2) == 0 || strncmp(cardNumber, "52", 2) == 0
strncmp(cardNumber, "53", 2) == 0 || strncmp(cardNumber, "54", 2) == 0 ||
strncmp(cardNumber, "55", 2) == 0) {
printf("Nomor kartu anda: %s\n", cardNumber);
printf("Tipe kartu anda: MASTERCARD\n");
} else {
printf("Nomor kartu anda: %s\n", cardNumber);
printf("Tipe kartu anda: TIDAK DIKETAHUI\n");
}
int checksum = 0;
int length = strlen(cardNumber);
for (int i = 0; i < length; i++) {
checksum += cardNumber[i] - '0';
}
} else {
printf("Nomor kartu anda: %s\n", cardNumber);
printf("Tipe kartu anda: TIDAK VALID\n");
}
return 0;
}
```