CREDIT CARD MINT

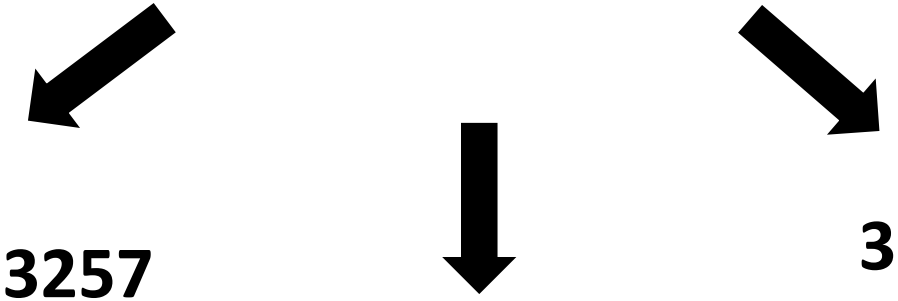
System for validation and generation of credit card numbers

Functionality

The application allows the user to generate credit card numbers in accordance with rules followed regularly in real-world scenarios.

Either a legitimate or counterfeit one can be created.

After generation, the numbers are stored and their legitimacy can be verified.

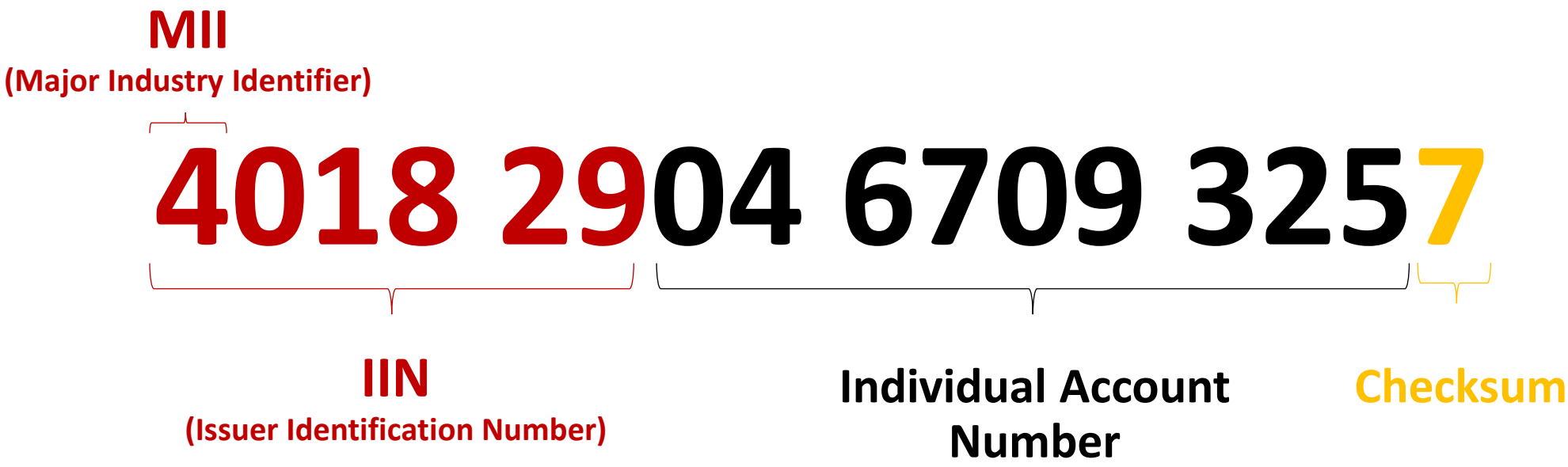


4018 2904 6709 3257

3743 450269 41267

5140 3002 4221 2433

Credit card number’s anatomy



Credit card number's anatomy

MII
(Major Industry Identifier)

4018 2904 6709 3257

IIN
(Issuer Identification Number)

	Visa	Mastercard	American Express
MII	4	5	34 or 37

	Visa	Mastercard	American Express
Bank of America	01829	12073	4314
Wells & Fargo	09028	14030	0034
Citibank	03564	13486	4345

Credit card number’s anatomy

4018 29**04 6709 325**7

Individual Account Number

Generated randomly

Credit card number’s anatomy

4018 2904 6709 3257

Checksum

Determined by Luhn’s algorithm

Luhn’s algorithm

4018 2904 6709 3257

Initial number	4	0	1	8	2	9	0	4	6	7	0	9	3	2	5
Multipliers	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Products	8	0	2	8	4	9	0	4	12	7	0	9	6	2	10
Sums of nums	8	0	2	8	4	9	0	4	3	7	0	9	6	2	1

8+0+2+8+4+9+0+4+3+7+0+9+6+2+1 = 63

(10 – (63 mod 10)) mod 10 = 7

Areas explored

- Implementation highlights
  - Abstract classes in C++
  - Using pointers to handle polymorphism in C++
- New knowledge
  - Format of credit card numbers
  - Luhn’s algorithm

Room for improvement

- More banks and brands to choose from
  - Not only American choices
- Using files to retrieve cards saved in previous sessions
- Add expiration dates
- Add CVV codes
- Add GUI