

Vehicle Insurance Management System

C++

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ABSTRACT

The project is a 1064-line good quality code vehicle insurance management system that can be used by insurance agents to manage their customers and their policies. The system has many options to begin with.

Files created will be stored in directory `./Database` which in turn contains 2 directories – `./Database/Customers` & `./Database/Policies`.

The directory `./Database/Customers` contains a file `all_customers.txt` which will contain all the customer IDs, and files storing customer details will have name `customer_<customerId>.txt`, and directory `./Database/Policies` contains a file `all_policies.txt` which will contain all the policy numbers, and file storing policy details will have name `policy_<policyNo>.txt`.

OUTPUT

Menu of Options

```
-----
|                               Ensure Ltd.                               |
| Ensure Ltd. Office 3, Koregaon Park, Pune - 411001, Maharashtra, India |
|                               Contact Number: +91-9822266622              |
|                               -----                               |
|
Choose an option:
1) Create Policy      - To create new policy
2) Find Policy        - To find policy based on key
3) View Policy Details - To find & print policy
4) View Customers     - To list customers & their policies with their premiums
5) Edit Customer      - To find & edit details of customer
6) View Total Premium - To get total premium of all policies
7) View All Policies  - To list all policies
8) Delete Policy      - To find & delete policy
C) Clear Console Screen - To clear text of console screen
Q) Quit              - To quit program

Enter your choice:
```

Option 1 - 2

```
Enter your choice: 1

| 1) Create Policy - To create new policy |
|-----|

Choose an option:
1) Create Policy for Existing Customer
2) Create Policy for New Customer
3) Go back

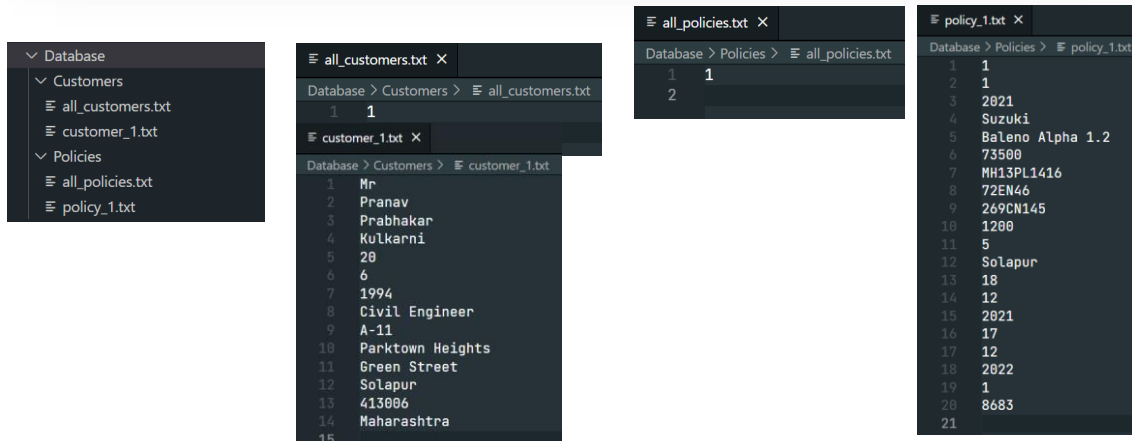
Enter your choice: 2

Enter the following details about the customer:
Name Prefix (Mr, Mrs, or Mx): Mr
First Name: Pranav
Middle Name: Prabhakar
Last Name: Kulkarni
Birth Date (DD): 20
Birth Month (MM): 06
Birth Year (YYYY): 1994
Occupation: Civil Engineer
Residence No: A-11
Residence Name: Parktown Heights
Residence Street / Chowk: Green Street
Residence City: Solapur
Residence Pin Code: 413006
Residence State: Maharashtra

Enter the following details about the vehicle:
Manufacture Year (YYYY): 2021
Make (Manufacturer): Suzuki
Model: Baleno Alpha 1.2
IDV (Insured's Declared Value) (in Rs.): 73500
Registration No (SSDDAANNNN): mh13p1416
Engine No: 72en46
Chassis No: 269cn145
CC (Cubic Capacity): 1200
Seating Capacity (N): 5
Registration Authority: solapur

Policy with policy number 1 created successfully for customer with customer ID 1.
```

The database directory has been created. Also, the associated information has been stored in respective files.



Option 2 - 1

```
Enter your choice: 2

-----
| 2) Find Policy - To find policy based on key |
-----

Choose an option:

1) Find Policy by Policy Number
2) Find Policy by Vehicle Registration Number
3) Find Policy by Engine Number
4) Find Policy by Chassis Number
5) Go back

Enter your choice: 2

Enter Vehicle Registration Number (SSDDAANNNN): mh13pl1416
Policy with vehicle registration number MH13PL1416 exists, and has policy number 1
```

Option 3 - 1

```
Enter your choice: 3

-----
| 3) View Policy Details - To find & print policy |
-----

Choose an option:

1) Find Policy by Policy Number
2) Find Policy by Vehicle Registration Number
3) Find Policy by Engine Number
4) Find Policy by Chassis Number
5) Go back

Enter your choice: 1

Enter Policy Number: 1
Policy with policy number 1 exists.
-----
| Policy Number | : 1
-----
| Customer ID | : 1
-----
| Customer Name | : Mr. Pranav Prabhakar Kulkarni
-----
| Customer Address | : A-11, Parktown Heights, Green Street, Solapur - 413006, Maharashtra, India
-----
| Policy Start Date | : 18/12/2021
-----
| Policy End Date | : 17/12/2022
-----
| Total Premium (with GST) | : Rs. 8,683
-----
| Vehicle Registration Number | : MH13PL1416
-----
| Registration Authority | : Solapur
-----
| Insured's Declared Value (IDV) | : Rs. 73,500
-----
| Engine Number | : 72EN46
-----
| Chassis Number | : 269CN145
-----
| Make & Model | : Suzuki Baleno Alpha 1.2
-----
| Manufacture Year | : 2021
-----
| Cubic Capacity (CC) | : 1200
-----
| Seating Capacity | : 5
-----
```

Option 2 - 1

```
Enter your choice: 1

-----
| 1) Create Policy - To create new policy |
-----

Choose an option:

1) Create Policy for Existing Customer
2) Create Policy for New Customer
3) Go back

Enter your choice: 1

Enter Customer ID: 1
Customer found.

Enter the following details about the vehicle:
Manufacture Year (YYYY): 2021
Make (Manufacturer): Toyota
Model: Land Cruiser LC 200 VX
IDV (Insured's Declared Value) (in Rs.): 147000
Registration No (SSDDAANNNN): mh13mv1111
Engine No: 45gh693d
Chassis No: 38v68x6
CC (Cubic Capacity): 4461
Seating Capacity (N): 7
Registration Authority: solapur

Policy with policy number 2 created successfully for customer with customer ID 1.
```

Option 2 - 1

```
Enter your choice: 1

-----
| 1) Create Policy - To create new policy |
-----

Choose an option:

1) Create Policy for Existing Customer
2) Create Policy for New Customer
3) Go back

Enter your choice: 1

Enter Customer ID: 1
Customer found.

Enter the following details about the vehicle:
  Manufacture Year (YYYY): 2021
  Make (Manufacturer): Toyota
  Model: Land Cruiser LC 200 VX
  IDV (Insured's Declared Value) (in Rs.): 147000
  Registration No (SSDDAANNNN): mh13mv1111
  Engine No: 45gh693d
  Chassis No: 38v68x6
  CC (Cubic Capacity): 4461
  Seating Capacity (N): 7
  Registration Authority: solapur

Policy with policy number 2 created successfully for customer with customer ID 1.
```

Option 2 - 2

```
Enter your choice: 1

-----
| 1) Create Policy - To create new policy |
-----

Choose an option:

1) Create Policy for Existing Customer
2) Create Policy for New Customer
3) Go back

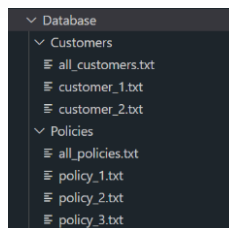
Enter your choice: 2

Enter the following details about the customer:
  Name Prefix (Mr, Mrs, or Mx): mrs
  First Name: ashwini
  Middle Name: ajit
  Last Name: karandikar
  Birth Date (DD): 14
  Birth Month (MM): 06
  Birth Year (YYYY): 1980
  Occupation: software developer
  Residence No: a-169
  Residence Name: parkside greens
  Residence Street / Chowk: tech square
  Residence City: solapur
  Residence Pin Code: 413007
  Residence State: maharashtra

Enter the following details about the vehicle:
  Manufacture Year (YYYY): 2021
  Make (Manufacturer): Tesla
  Model: Model S Plaid
  IDV (Insured's Declared Value) (in Rs.): 215500
  Registration No (SSDDAANNNN): mh13ml0001
  Engine No: d46d9tg
  Chassis No: h7x63x4
  CC (Cubic Capacity): 13600
  Seating Capacity (N): 5
  Registration Authority: solapur

Policy with policy number 3 created successfully for customer with customer ID 2.
```

Database



Option 4

```
-----
|                               Ensure Ltd.                               |
| Ensure Ltd. Office 3, Koregoan Park, Pune - 411001, Maharashtra, India |
| Contact Number: +91-9822266622                                         |
|                               -----                               |
|
Choose an option:
1) Create Policy      - To create new policy
2) Find Policy        - To find policy based on key
3) View Policy Details - To find & print policy
4) View Customers     - To list customers & their policies with their premiums
5) Edit Customer      - To find & edit details of customer
6) View Total Premium - To get total premium of all policies
7) View All Policies  - To list all policies
8) Delete Policy      - To find & delete policy
C) Clear Console Screen - To clear text of console screen
Q) Quit              - To quit program

Enter your choice: 4

-----
| 4) View Customers - To list customers & their policies with their premiums |
|                               -----                               |
|                               | Customer ID : 1 |                               |
|                               -----                               |
|
-----
| Policies & Premiums | : Policy No 1 : Rs. 8,683, Policy No 2 : Rs. 17,356
|                               -----                               |
|
| Total Premium | : Rs. 26,039
|                               -----                               |
|
-----
|                               | Customer ID : 2 |                               |
|                               -----                               |
|
-----
| Policies & Premiums | : Policy No 3 : Rs. 25,439
|                               -----                               |
|
| Total Premium | : Rs. 25,439
|                               -----                               |
```

Option 6

```
Enter your choice: 6

-----
| 6) View Total Premium - To get total premium of all policies |
|                               -----                               |
|
| Total Premium | : Rs. 51,478
|                               -----                               |
```

Option 7

```
Enter your choice: 7

-----
| 7) View All Policies - To list all policies |
|                               -----                               |
|
-----
| Policy Number 1 | : Rs. 8,683 (Customer ID: 1)
|                               -----                               |
| Policy Number 2 | : Rs. 17,356 (Customer ID: 1)
|                               -----                               |
| Policy Number 3 | : Rs. 25,439 (Customer ID: 2)
|                               -----                               |
```

Option 7

```
Enter your choice: 5

-----
| 5) Edit Customer - To find & edit details of customer |
|                               -----                               |
|
Enter the customer ID to edit the customer: 1

Enter the following details about the customer:
Name Prefix (Mr, Mrs, or Mx): mr
First Name: pranav
Middle Name: prabhakar
Last Name: kulkarni
Birth Date (DD): 20
Birth Month (MM): 6
Birth Year (YYYY): 1994
Occupation: civil engineer
Residence No: ab-89
Residence Name: Planetopia
Residence Street / Chowk: tree square
Residence City: solapur
Residence Pin Code: 413002
Residence State: maharashtra

Customer details of customer with customer ID 1 edited successfully!
```

Previous customer_1.txt

```
customer_1.txt X
Database > Customers > customer_1.txt
1 Mr
2 Pranav
3 Prabhakar
4 Kulkarni
5 20
6 6
7 1994
8 Civil Engineer
9 A-11
10 Parktown Heights
11 Green Street
12 Solapur
13 413006
14 Maharashtra
15
```

New customer_1.txt file

```
customer_1.txt X
Database > Customers > customer_1.txt
1 Mr
2 Pranav
3 Prabhakar
4 Kulkarni
5 20
6 6
7 1994
8 Civil Engineer
9 ab-89
10 Planetopia
11 Tree Square
12 Solapur
13 413002
14 Maharashtra
15
```

Option 8

```
Enter your choice: 8

-----
| 8) Delete Policy - To find & delete policy |
-----

Choose an option:

1) Find Policy by Policy Number
2) Find Policy by Vehicle Registration Number
3) Find Policy by Engine Number
4) Find Policy by Chassis Number
5) Go back

Enter your choice: 1

Enter Policy Number: 1
Policy with policy number 1 exists.
Deleted the policy.
```

Option 7

```
Enter your choice: 7

-----
| 7) View All Policies - To list all policies |
-----

-----
| Policy Number 2 | : Rs. 17,356 (Customer ID: 1)
-----

-----
| Policy Number 3 | : Rs. 25,439 (Customer ID: 2)
-----
```

Database

```

Database
├── Customers
│   ├── all_customers.txt
│   ├── customer_1.txt
│   └── customer_2.txt
└── Policies
    ├── all_policies.txt
    ├── policy_2.txt
    └── policy_3.txt
```

```
all_policies.txt X
Database > Policies > all_policies.txt
1 2
2 3
3
```

Option Q

```
Enter your choice: q

-----
| You Quit the Program |
-----
```