User Story 1

As a registry officer
I want to add a new person via addPerson
so that their record is stored in persons.txt for later lookup

1. Given a valid personID (NNX...XLL) and correctly-formatted address and birthdate
   When I call addPerson(...)
   Then it returns true and appends a line in persons.txt.
2. Given personID too short, wrong pattern, address state ≠ Victoria or birthdate not DD-MM-YYYY
   When I call addPerson(...)
   Then it returns false and leaves persons.txt unchanged.
3. Given any valid input edge (e.g. special characters exactly two)
   When I call addPerson(...)
   Then it still returns true, proving boundary conditions pass.

User Story 2

As a registry officer
I want to update an existing person's details via updatePersonalDetails
so that I can keep their record current

1. Given a person under 18 and a new address
   When I call updatePersonalDetails(...)
   Then it returns false and address remains unchanged.
2. Given a request to change birthday plus any other field
   When I call updatePersonalDetails(...)
   Then it returns false and no fields are updated.
3. Given a person whose current ID starts with an even digit and a new ID
   When I call updatePersonalDetails(...)
   Then it returns false and the original ID stays.

User Story 3

As a registry officer
I want to add demerit points via addDemeritPoints
so that each offence is logged and suspension status calculated

1. Given an offence date in DD-MM-YYYY and points 1–6
   When I call addDemeritPoints(...)
   Then it returns "Success" and the entry appears in the demerit log.
2. Given invalid date format or points outside 1–6
   When I call addDemeritPoints(...)
   Then it returns "Failed" and no log entry is added.
3. Given total points in last 2 years exceed the threshold (6 if < 21, 12 if ≥ 21)
   When I call addDemeritPoints(...)
   Then the person's isSuspended flag becomes true immediately.

User Story 4

As a registry officer
I want to retrieve a person's full record
so that I can review personal details, demerit history and suspension status

1. Given a valid personID
   When I request their record
   Then the system returns personal fields + demerit entries + isSuspended.
2. Given a non-existent personID
   When I request their record
   Then the system returns an error "Person not found."
3. Given up to 10 000 records in files
   When I retrieve a valid record
   Then response time is under 2 seconds.

User Story 5

As a registry officer
I want to search for a person by ID
so that I can quickly access their details

1. Given an existing personID
   When I perform a search
   Then the system returns that person's record.
2. Given a non-matching personID
   When I perform a search
   Then the system returns "No records found."
3. Given valid input formats
   When I perform repeated searches
   Then each returns within 1 second.

User Story 6

As a system administrator
I want nightly backups of persons.txt and the demerit log
so that I can restore data in case of loss

1. Given the daily schedule at 02:00 AM
   When the scheduled job runs
   Then it copies both files into /backup/YYYY-MM-DD/.
2. Given a successful backup
   When the job completes
   Then it logs "Backup successful" in backup.log.
3. Given backups older than 30 days
   When the job runs
   Then it deletes those older folders automatically.

User Story 7

As a developer
I want to enforce input validation before saving
so that only correctly formatted data enters the system

1. Given incoming data to addPerson or updatePersonalDetails
   When validation runs
   Then it rejects any invalid field and reports errors.

2. Given a validation failure
   When the user submits data
   Then no file writes occur.
3. Given all fields valid
   When the user submits data
   Then the respective method proceeds and writes to file.

User Story 8
As a developer
I want to run all unit tests automatically on each push
so that I can detect regressions immediately
   1. Given a git push to main
      When GitHub Actions triggers
      Then it runs mvn test and reports pass/fail.
   2. Given any test failure
      When the workflow completes
      Then the Actions status is failed and details are visible.
   3. Given all tests pass
      When the workflow completes
      Then the Actions status is success and no manual intervention is needed.