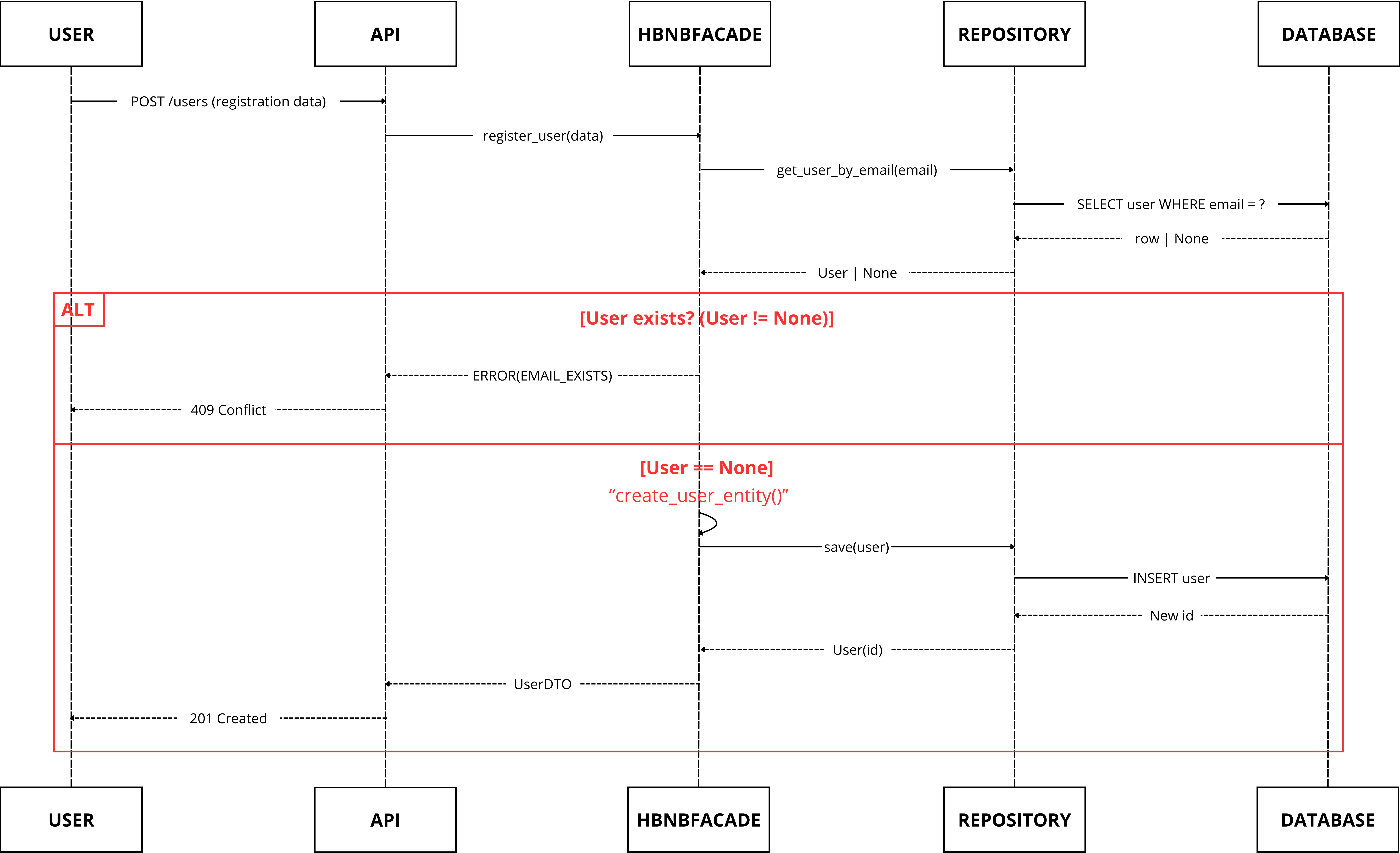


SD-01 — User Registration (POST /users)



Explanatory Notes:

- Purpose :**
- Register a new user account by validating uniqueness (email) and persisting the user.
- Key steps :**
- User sends POST /users with registration payload.
  - API forwards request to HBNBFacade.register\_user(data).
  - Facade asks Repository to check if email already exists (SELECT user WHERE email=?).
  - If user exists: Facade returns Error(EMAIL\_EXISTS) → API returns 409 Conflict.
  - If user does not exist: Facade creates User entity, Repository persists it (INSERT user) and returns new id.
  - Facade maps persisted entity to UserDTO → API returns 201 Created + UserDTO.

- Layer responsibilities :**
- Presentation (API): receives request, delegates to facade, returns HTTP response.
  - Business (HBNBFacade): orchestrates use case + validation (email uniqueness) + DTO mapping.
  - Persistence (Repository/DB): executes SELECT/INSERT, returns rows/new id.

- Outputs / errors :**
- Success: 201 Created + UserDTO
  - Failure: 409 Conflict (email already exists)