


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)