

JPA Query Methods Based on Column Type & Data Type			
Table: JPA Query Methods			
Column Type	Data Type	Method Signature	Description
Unique	String	Optional<User> findByEmail(String email);	Finds a single user by a unique email (Optional to avoid null).
Unique	Long	Optional<Product> findById(Long id);	Fetches a single record using primary key.
Unique	UUID	Optional<Order> findById(UUID orderId);	Finds an order by a unique UUID.
Non-Unique	String	List<User> findByCity(String city);	Finds all users living in a given city.
Non-Unique	Integer	List<Product> findByStockGreaterThan(Integer stock);	Finds all products with stock greater than a given value.
Non-Unique	Date	List<Order> findByCreatedDateBetween(Date start, Date end);	Finds orders created within a date range.
Unique	Boolean	Optional<FeatureFlag> findByIsActive(Boolean isActive);	Finds a unique feature flag based on activation status.
Non-Unique	Boolean	List<User> findByIsActiveTrue();	Finds all active users.
Non-Unique	Enum	List<Order> findByStatus(OrderStatus status);	Fetches orders based on status (PENDING, SHIPPED, etc.).
Non-Unique	BigDecimal	List<Product> findByPriceBetween(BigDecimal min, BigDecimal max);	Finds products in a given price range.
Non-Unique	List<String>	List<User> findByRolesIn(List<String> roles);	Finds users matching any role from a list.
Non-Unique	LocalDateTime	List<Log> findByTimestampAfter(LocalDateTime timestamp);	Fetches logs created after a specific time.
Non-Unique (Large Dataset)	String	Stream<User> findByLastName(String lastName);	Streams users with a given last name (useful for large datasets).
Non-Unique (Paginated)	String	Page<User> findByDepartment(String department, Pageable pageable);	Finds users in a department with pagination.
<b>Key Takeaways</b>			
For Unique Columns, use Optional<T> to handle possible null results.			
For Non-Unique Columns, return List<T>, Stream<T>, or Page<T> if pagination is needed.			
For Numeric Comparisons, use GreaterThan, LessThan, or Between (e.g., findByPriceBetween()).			
For Boolean Columns, use findByIsActiveTrue() or findByIsActiveFalse().			
For Enum Columns, use the enum type directly (e.g., findByStatus(OrderStatus.SHIPPED)).			