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BELOW CODE IS TO BE ADDED IN SpringCoreDemo project created

Step 1: Prepare model and entity

1. Create table book id, name and price as columns. Id as primary key
2. Insert few records in database for book table
3. Create a class Book as follows:

```
public class Book {
   private int id;
   private String name;
   private double price;
   // getters and setters
  //  constructor
  // toString
}
```

Step 2: Database configuration in spring project

4. Create a class JavabasedConfiguration within package com.demo.jdbc and write below code:

```
@Configuration
public class JavabasedConfiguration {

@Bean
public DataSource getDataSource()
{
        DriverManagerDataSource dataSource = new DriverManagerDataSource();

        // UPDTATE YOUR CREDeNTIALS AND DATABASE NAME

        dataSource.setDriverClassName("com.mysql.cj.jdbc.Driver");
        dataSource.setUrl("jdbc:mysql://localhost:8889/java");
        dataSource.setUsername("root");
        dataSource.setPassword("root");

        System.out.println("Data source created");
        return dataSource;
}
@Bean
@Autowired
public JdbcTemplate getTempalte(DataSource ds){
        return new JdbcTemplate(ds);
}
```

Step 3: Inject JdbcTemplate

1. Create a class BookDatabase with a dependency on JdbcTemplate as follows :
   @Repository annotation is a semantic annotation for @Component

```
@Repository
public class BookDatabase {

    JdbcTemplate jdbcTemplate;

    public void getJdbcTemplate() {
        return this.jdbcTemplate = jdbcTemplate;

    }
}
```

2. Now in App class, call the getJdbcTemplate method and check if it is null or not.
3. **If not null then proceed to next step**

Step 4: Perform Crud Operations

1. Update BookDatabase as follows :

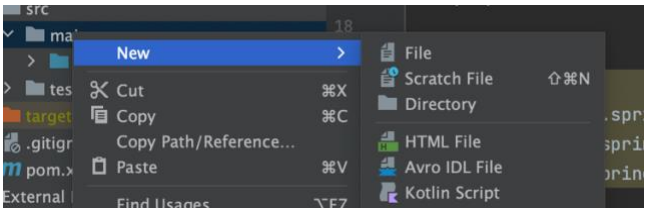
```
public int getBookCount()
    {
        int count =this.jdbcTemplate.queryForObject("select count(*) from book",
Integer.class);
        return count;
    }
    public void insertBook(Book book) {
        // Line 1
        String sql = "insert into Book values(?,?,?)";
        // Line 2
        int count = jdbcTemplate.update(sql,
    book.getId(),Book.getName(),Book.getPrice());
        // Line 3
        System.out.println("=====>>> count :: " + count);
    }
    public void updateBook(Integer id, String name) {
        // Line 1
        String sql = "update book set name=? where id = ? ";
        // Line 2
        int count = jdbcTemplate.update(sql, name, id);
        // Line 3
        System.out.println("=====>>> count :: " + count);
    }
    public void deleteBook(Integer id) {
        // Line 1
        String sql = "delete from book where id = ? ";
        // Line 2
        int count = jdbcTemplate.update(sql,id);
        // Line 3
```

```
		System.out.println("=====>>> count :: " + count);
	}


	public void queryForBookName(Integer id) {
		String sql = "SELECT name FROM Book where id = ?";
		String name = jdbcTemplate.queryForObject(sql,
				new Object[]{id} ,String.class);
		System.out.println("=====>>> Name :: " + name);
	}
	public void queryForBook(Integer id) {
		String sql = "SELECT * FROM book where id = ?";
		Book Book = jdbcTemplate.queryForObject(sql,
				new Object[] {id}, new BookMapper());
		System.out.println("=====>>> Book details :: " + Book);
	}
	public void queryForBooks() {
		String sql = "SELECT * FROM book";
		List<Book> Book = jdbcTemplate.query(sql, new BookMapper());
		System.out.println("ID\tName\tPrice");
		for (Book book : Book)
		{
			System.out.print(book.getId()+"\t");
			System.out.print(book.getName()+"\t");
			System.out.print(book.getPrice()+"\t");
			System.out.println();
		}
	}

	// make sure to correctly import the RowMapper
	// import org.springframework.jdbc.core.RowMapper;

	class BookMapper implements RowMapper<Book>{
		public Book mapRow(ResultSet rs, int rowNum) throws SQLException {
			Book c1 = new Book();
			c1.setId(rs.getInt(1));
			c1.setName(rs.getString(2));
			c1.setPrice(rs.getDouble(3));
			return c1;
		}
	}
```

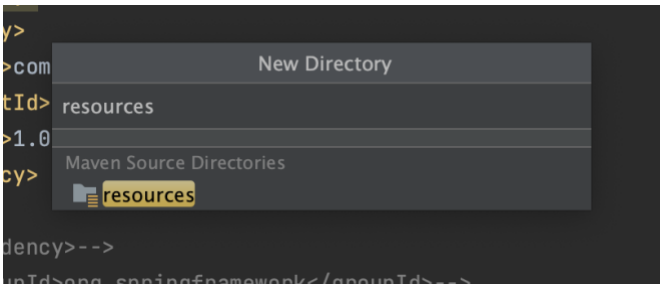
Step 4: Properties file and @PropertySource annotation

1. Hardcoding the database credentials is not a good practice.
2. Skip step 2 if resources folder is already there within main folder
3. Create resources folder [IF NOT ALREADY THERE] within the SpringCoreDemo project as follows:

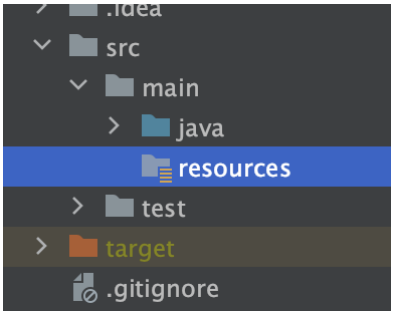
   Right click main folder -> New -> Directory



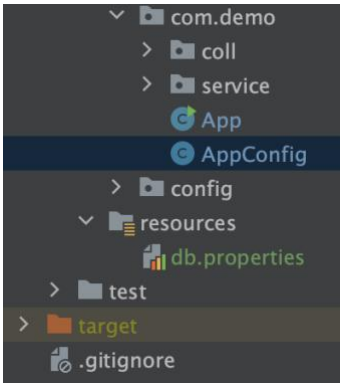
   Type resources as directory name



   It looks as below



   Create a file db.properties within resources folder



4. Update the properties file as follows:

```
# WINDOWS USERS port is 3306
# url=jdbc:mysql://localhost:3306/java
url=jdbc:mysql://localhost:8889/java
dbusername=root
password=root
driver=com.mysql.cj.jdbc.Driver
```

5. Update JavabasedConfiguration to read values from properties file as follows:

```
@Configuration
@PropertySource("classpath:db.properties")
public class JavabasedConfiguration {

    @Value("${driver}")
    private String driver;

    @Value("${url}")
    private String url;

    @Value("${dbusername}")
    private String username;

    @Value("${password}")
    private String password;

@Bean
public DataSource getDataSource()
{
        DriverManagerDataSource dataSource = new DriverManagerDataSource();
        dataSource.setDriverClassName(driver);
        dataSource.setUrl(url);
        dataSource.setUsername(username);
        dataSource.setPassword(password);
        System.out.println("Data source created");
        return dataSource;
    }

    …
    }
```

Everything else should work the same