**Index**

1. **Overview** 2

**2.1. Server Architecture Overview diagram** 3

**2.2. Bettle application design** 3

* 1. **Controller diagram:** 4

**2.4. Service Layer diagram** 5

**2.5. Repository Layer Diagram** 6

**3.0 . Spring Boot component** 7

1. **Overview**

This document describes about Bettle application request and response flow it also contains architecture each component description.

1. **Server side Architecture Diagram:**

**2.1 Server Architecture Overview diagram:**



**Application Server**

File System

Data Base

Bettle app

Request

Response

Client

Figure: 2.1 1

1. Client sends the request to the application server.

2. Application server receives it and handovers the request to Bettle Application.

3. Bettle application will process the request and sends response to the client.

* 1. **Bettle application design**

Repository Layer

**Bettle Application Layer**

Service Layer

Data Base

File System

Controller Layer

Res

Req



Figure: 2.1 2

1. Application server receives the request and then handovers it to Bettle application.
2. Bettle application uses the spring boot framework and the interceptor is a component in Bettle spring boot configuration.
3. The request passes through interceptor and validated by the interceptor. After validation, spring boot application handovers it to respective controller to process the request.
4. Controller process the request by using respective services. Controller receives the request data as a model object and then handover it to service.
5. The service in service layer create /fetch the entities with model data and handovers the entities to repository.
6. The respective repository gets the entities and do the operations on database using Hibernate framework.
7. The response of the Hibernate operations will be send back to service layer by the repository layer.
8. The service layer process the data gets by the repository layer and uses the File system at required places. And the processed data passed back to controller layer.
9. The controller handovers the response to the spring boot framework.
10. The spring boot system passes the response data to respective view in case of non web service request or the response data will be send back to client as produced format(XML / JSON) in case of web services.
    1. **Controller diagram:**

Res

**Bettle App Controller Layer**

**Controller Layer**

Service Layer

View layer

Model Layer

M

M

M

N

**....**



Req

Res

Figure: 2.1 3

1. Interceptor receives the request and validates it.
2. Interceptor will send only validate request and passes to the controller
3. Controller receives the request data as a model object and then handover it to service layer and get the response to controller.
4. Controller will handovers the model data and appropriate view name and location to spring boot framework.

* 1. **Service Layer diagram**

1. Service layer will get the data from Controller layer.

Figure: 2.1 4

**Bettle App Service Layer**

Controller Layer

**Service Layer**

Model Layer

M

M

M

N

**....**

File System

Res

Req

2. The services will do the process the data such as converting model to entities and handovers it to the repository layer and get the data from repository layer.

3. If entities contains any file path, It will read or write on file system

**2.5 Repository Layer Diagram**

Figure: 2.1 5

**Bettle App Repository Layer**

**Repository Layer**

Data Base

Service Layer

Entity Layer

E

N

**....**

E

E

Res

Req

1. Repository are defines in the Repository Layer and implemented at run time by the Spring framework.
2. Repository get the entities from Service layer and convert it to SQL queries using hibernate framework.
3. The Hibernate execute the query (insert/update/delete) and fetch the data from database.
4. **Spring Boot component**

Figure 3.0

**Bettle Spring Boot App Component**

Message.properties

Thymeleaf

JAR Files

Application

.properties

1. Application.properties contains all the configurations of spring boot framework.
2. Messages.properties contains all the labels or messages to use in internationalization.
3. Thymeleaf is html view of html response.
4. JAR Files contains all spring’s libraries.