12 - Getbean By Type

getBean() method retrieves an object from the Spring container. By default, getBean() returns an Object type, which requires type-casting.

➢ **getBean(String id)**: Returns an object that requires type-casting.

```
Alien obj1 = (Alien) context.getBean("alien1");
```

👉 **Using getBean(String, Class<T>)**:
- To avoid manual type-casting, we can use the other signature of getBean(), which accepts both the bean name and the class type as parameters.
- This method automatically casts the returned object to the specified class (Alien), avoiding the need for explicit casting.

➢ **getBean(String id, Class<T> type)**: Returns an object of the specified type, no casting needed.

```
Alien obj1 = context.getBean("alien1", Alien.class);
```

👉 **Retrieving by Class Type**:

- If we have a single bean of a particular class, we can retrieve it directly by specifying only the class in the getBean() method.
- This approach works only if there is one bean of the specified class (Alien) in the Spring container. If there are multiple beans of the same class, it will throw an exception (NoUniqueBeanDefinitionException).

➢ **getBean(Class<T> type)**: Retrieves a bean by class type, but works only if there is a single bean of that type in the container.

```
Alien obj1 = context.getBean(Alien.class);
```

Code Link:

https://github.com/navinreddy20/spring6-course/tree/c6690e4f2c70d8f530d70623f13d14ff0ffd7e7d/2%20Exploring%20Spring%20Framework/2.12%20Getbean%20By%20Type/Spring1