

# Coding Ninjas Application

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## A. Problem Statement:

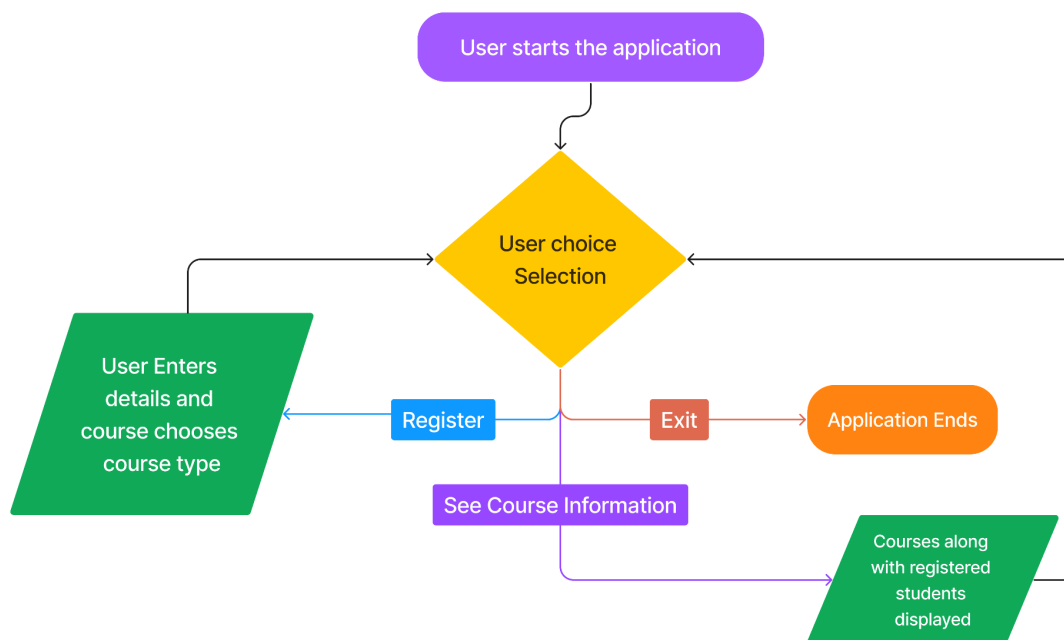
You are creating the Coding Ninjas Application which is a console application implementing concepts of IOC, and Dependency Injection using XML Configuration. The application registers the user for a course and shows the list of students for that particular course.

## B. Steps to Create the Project:

1. Go to [start.spring.io](http://start.spring.io) and create a new project.
2. Add the necessary dependencies for the project.
3. Create a User interface with the following methods
  - a. `getUserDetails()`
  - b. `setUserDetails()`
4. Create a UserList interface with the following methods:
  - a. `getUserList()`
  - b. `addUser()`
5. Create a Course Interface with the following methods:
  - a. `setCourseDetail()`
  - b. `getUserList()`
  - c. `getInstructor()`
  - d. `getCourseName()`
6. Create a Instructor interface with the following methods:
  - a. `setInstructorDetails()`
  - b. `takeClass()`
7. Create two classes `JavaInstructor` and `SimpleInstructor` both implementing `Instructor` interface with common attributes:
  - a. `String name`
  - b. `Int age`
  - c. Add `init` and `destroy` methods
8. Create a `SimpleUser` class implementing `User` interface, having attributes:
  - a. `String name`
  - b. `String age`
  - c. `String location`
  - d. `String collegeName`
9. Create a `PaidCourse` class implementing `Course` interface, having attributes:
  - a. `String courseName`
  - b. `Instructor courseInstructor`
  - c. `UserList userList`
10. Create a `SimpleUserList` class having the attribute:
  - a. `List of Users`
11. Create the `ApplicationContext.xml` file:
  - a. Create beans for `Simpleuser` and `SimpleUserList` with `prototype` scope.

- b. Create beans for JavaInstructor and SpringInstructor, and two beans for PaidCourse one with dependency JavaInstructor and the other with SpringInstructor.
12. In the main method, take context from ApplicationContext.xml, create two courses named **spring and java** courses and set their instructors.
13. Create an application as the flow given below.
14. Run and test your application

## C. Application Flow:



## D.Sample Output:

```
Please select from the following:
1) Register a new user
2) See course information
3) To quit
1
Please enter your name
John
Please enter your age
45
Please enter your College
SGSITS
Please enter your location
Indore
Please select a course
0)Basics of Java
1)Spring and Spring boot
1
-----XXXXXX-----
Please select from the following:
1) Register a new user
2) See course information
3) To quit
1
Please enter your name
Virat
Please enter your age
26
Please enter your College
IIM
Please enter your location
Delhi
Please select a course
0)Basics of Java
1)Spring and Spring boot
0
-----XXXXXX-----
Please select from the following:
1) Register a new user
2) See course information
3) To quit
2
-----XXXXXX-----
Basics of Java
The students in the course:
1) Virat age:26
-----XXXXXX-----
Spring and Spring boot
The students in the course:
1) John age:45
-----XXXXXX-----
Please select from the following:
1) Register a new user
2) See course information
3) To quit
3
program stopped
```

You can also download the solution from the [link](#).