

## Exercise (Spring Container)

The reason for my choice of the order of all choices is the first thing I should consider. Should I start with the method that does not take a parameter, then can I run other methods that do not take parameters or methods that take parameters, depending on the method that **has already been called and completed its execution**.

Q1

```
1 usage
@SpringBootApplication
public class SpringPollApplication {

    public static void main(String[] args) { SpringApplication.run(SpringPollApplication.class, args); }

    @Bean
    public String getMessage1(){
        System.out.println("hey from message1");
        return "1";
    }
}
```

Print (hey from message1)

And return 1 to getMessage1 method

Put 1 as String in Container

Q2

```

1 usage
2 @SpringBootApplication
3 public class SpringPollApplication {
4
5     public static void main(String[] args) { SpringApplication.run(SpringPollApplication.class, args); }
6
7     @Bean
8     @Qualifier("1")
9     public String getMessage1(){
10         System.out.println("hey from message1");
11         return "1";
12     }
13
14     @Bean
15     public String getMessage2(@Qualifier("1") String data ){
16         System.out.println("hey from message2");
17         return data ;
18     }
19 }

```

Start with method getMessage1 because does not take a parameter  
then Print (hey from message1)

Return 1 to getMessage1

Return 1 to Qualifier("1")

Put the String(1) to Contianer

Then

getMessage2 runs

This method is dependent upon the (getMessage1) method.

take the returned value in method have Qualifier("1") (getMessage1)  
as parameter here = "1"

then print hey from message2

then return "1" to getMessage2

Put the String(1) to Contianer

Q3

```
@Bean
@Qualifier("1")
public String getMessage1(){
    System.out.println("hey from message1");
    return "1";
}

@Bean
@Qualifier("2")
public String getMessage2(@Qualifier("3") String data ){
    System.out.println("hey from message2");
    return data;
}

@Bean
@Qualifier("3")
public String getMessage3(){
    System.out.println("hey from message3");
    return "3" ;
}
```

Here I have three scenario

1-

Start with getMessage1 or getMessage3 because does not take a parameter

In this scenario well take getMessage1

Print (hey from message1)

Return 1 to getMessage1

Return 1 to Qualifier("1")

Put the String(1) to Contianer

Then

getMessage3 run because does not take a parameter and

getMessage2 should be run after Qualifier("3") is run

Print (hey from message3)

Return 3 to getMessage3

Return 3 to Qualifier("3")

Put the String(3) to Contianer

Then

getMessage2 run

This method is dependent upon the (getMessage3) method.

take the value of Qualifier("3") as input here = "3"

Print (hey from message2)

Return 3 to getMessage2

Return 3 to Qualifier("2")

Put the String(3) to Contianer

-----

2-

Start with getMessage1 or getMessage3 because does not take a parameter

In this scenario well take getMessage3

Start getMessage3 run because does not take a parameter

Print (hey from message3)

Return 3 to getMessage3

Return 3 to Qualifier("3")  
Put the String(3) to Contianer  
Then  
getMessage2 run  
This method is dependent upon the (getMessage3) method.  
take the value of Qualifier("3") as input here = "3"  
Print (hey from message2)  
Return 3 to getMessage2  
Return 3 to Qualifier("2")  
Put the String(3) to Contianer  
Then  
getMessage1 run  
Print (hey from message1)  
Return 1 to getMessage1  
Return 1 to Qualifier("1")  
Put the String(1) to Contianer

---

3-

Start with getMessage1 or getMessage3 because does not take a parameter

In this scenario well take getMessage3

Start getMessage3 run because does not take a parameter

Print (hey from message3)  
Return 3 to getMessage3  
Return 3 to Qualifier("3")  
Put the String(3) to Contianer  
Then  
getMessage1 run  
Print (hey from message1)  
Return 1 to getMessage1  
Return 1 to Qualifier("1")  
Put the String(1) to Contianer  
Then

getMessage2 run

This method is dependent upon the (getMessage3) method.

take the value of Qualifier("3") as input here = "3"

Print (hey from message2)

Return 3 to getMessage2

Return 3 to Qualifier("2")

Put the String(3) to Container

Q4

```
@Bean
@Qualifier("1")
public String getMessage1(){
    System.out.println("hey from message1");
    return "1";
}

@Bean
@Qualifier("2")
public String getMessage2(@Qualifier("3") String data ){
    System.out.println("hey from message2");
    return data;
}

@Bean
@Qualifier("3")
public String getMessage3(){
    System.out.println("hey from message3");
    return "3" ;
}
```

```
@Component
public class MainController {

    1 usage
    String data;

    public MainController(@Qualifier("1") String data){
        this.data=data;
        System.out.println("hey from Main controller");
    }
}
```

Here I have 6 scenario

1-

Start with getMessage1 or getMessage3 because does not take a parameter

In this scenario well take getMessage1

Print (hey from message1)

Return 1 to getMessage1

Return 1 to Qualifier("1")

Put the String(1) to Contianer

Then

getMessage3 run

Print (hey from message3)

Return 3 to getMessage3

Return 3 to Qualifier("3")

Put the String(3) to Contianer

Then

getMessage2 run

This method is dependent upon the (getMessage3) method.

take the value of Qualifier("3") as input here = "3"

Print (hey from message2)

Return 3 to getMessage2

Return 3 to Qualifier("2")

Put the String(3) to Contianer

Then

Constructor MainController run

This method is dependent upon the (getMessage1) method.

Take value of Qualifier("1") here = "1" as input

Assign "1" to variable data

Print (hey from Main Controller)

Put the MainController to Contianer

-----



2-

Start with getMessage1 or getMessage3 because does not take a parameter

In this scenario well take getMessage1

Print (hey from message1)

Return 1 to getMessage1

Return 1 to Qualifier("1")

Put the String(1) to Contianer

Then

getMessage3 run

Print (hey from message3)

Return 3 to getMessage3

Return 3 to Qualifier("3")

Put the String(3) to Contianer

Then

Constructor MainController run

This method is dependent upon the (getMessage1) method.

Take value of Qualifier("1") here = "1" as input

Assign "1" to variable data

Print (hey from Main Controller)

Put the MainController to Contianer

Then

getMessage2 run

This method is dependent upon the (getMessage3) method.

take the value of Qualifier("3") as input here = "3"

Print (hey from message2)

Return 3 to getMessage2

Return 3 to Qualifier("2")

Put the String(3) to Contianer

-----

3-

Start with getMessage1 or getMessage3 because does not take a

parameter

In this scenario well take getMessage1

Print (hey from message1)

Return 1 to getMessage1

Return 1 to Qualifier("1")

Put the String(1) to Contianer

Then

Constructor MainController run

This method is dependent upon the (getMessage1) method.

Take value of Qualifier("1") here = "1" as input

Assign "1" to variable data

Print (hey from Main Controller)

Put the MainController to Contianer

Then

getMessage3 run

Print (hey from message3)

Return 3 to getMessage3

Return 3 to Qualifier("3")

Put the String(3) to Contianer

Then

getMessage2 run

This method is dependent upon the (getMessage3) method.

take the value of Qualifier("3") as input here = "3"

Print (hey from message2)

Return 3 to getMessage2

Return 3 to Qualifier("2")

Put the String(3) to Contianer

---

4-

Start with getMessage1 or getMessage3 because does not take a parameter

In this scenario well take getMessage3

Start getMessage3 run because does not take a parameter

Print (hey from message3)

Return 3 to getMessage3

Return 3 to Qualifier("3")

Put the String(3) to Contianer

Then

getMessage2 run

This method is dependent upon the (getMessage3) method.

take the value of Qualifier("3") as input here = "3"

Print (hey from message2)

Return 3 to getMessage2

Return 3 to Qualifier("2")

Put the String(3) to Contianer

Then

getMessage1 run

Print (hey from message1)

Return 1 to getMessage1

Return 1 to Qualifier("1")

Put the String(1) to Contianer

Then

Constructor MainController run

This method is dependent upon the (getMessage1) method.

Take value of Qualifier("1") here = "1" as input

Assign "1" to variable data

Print (hey from Main Controller)

Put the MainController to Contianer

---

5-

Start with getMessage1 or getMessage3 because does not take a parameter

In this scenario well take getMessage3

Start getMessage3 run because does not take a parameter

Print (hey from message3)

Return 3 to getMessage3  
Return 3 to Qualifier("3")  
Put the String(3) to Contianer  
Then  
getMessage1 run  
Print (hey from message1)  
Return 1 to getMessage1  
Return 1 to Qualifier("1")  
Put the String(1) to Contianer  
Then

getMessage2 run  
This method is dependent upon the (getMessage3) method.  
take the value of Qualifier("3") as input here = "3"  
Print (hey from message2)  
Return 3 to getMessage2  
Return 3 to Qualifier("2")  
Put the String(3) to Contianer  
Then

Constructor MainController run  
This method is dependent upon the (getMessage1) method.  
Take value of Qualifier("1") here = "1" as input  
Assign "1" to variable data  
Print (hey from Main Controller)  
Put the MainController object to Contianer

---

6-

Start with getMessage1 or getMessage3 because does not take a parameter

In this scenario well take getMessage3  
Start getMessage3 run because does not take a parameter  
Print (hey from message3)  
Return 3 to getMessage3  
Return 3 to Qualifier("3")

Put the String(3) to Contianer

Then

getMessage1 run

Print (hey from message1)

Return 1 to getMessage1

Return 1 to Qualifier("1")

Put the String(1) to Contianer

Then

Constructor MainController run

This method is dependent upon the (getMessage1) method.

Take value of Qualifier("1") here = "1" as input

Assign "1" to variable data

Print (hey from Main Controller)

Put the MainController object to Contianer

Then

getMessage2 run

This method is dependent upon the (getMessage3) method.

take the value of Qualifier("3") as input here = "3"

Print (hey from message2)

Return 3 to getMessage2

Return 3 to Qualifier("2")

Put the String(3) to Contianer

Q5

```

15
16 @Bean
17 @Qualifier("1")
18 public String getMessage1(MainController mainController){
19     System.out.println("hey from message1");
20     return "1";
21 }
22
23 @Bean
24 @Qualifier("2")
25 public String getMessage2(@Qualifier("3") String data ){
26     System.out.println("hey from message2");
27     return data;
28 }
29
30 @Bean
31 @Qualifier("3")
32 public String getMessage3(){
33     System.out.println("hey from message3");
34     return "3" ;
35 }

```

```

import org.springframework.beans.factory.annotation.Qualifier;
import org.springframework.stereotype.Component;

1 usage
@Component
public class MainController {

    1 usage
    String data;

    public MainController(@Qualifier("2") String data){
        this.data=data;
        System.out.println("hey from Main controller");
    }
}

```

1 -

Start with getMessage3 because does not take a parameter

Print (hey from message3)

Return 3 to getMessage3

Return 3 to Qualifier("3")

Put the String(3) to Contianer

Then

getMessage2 because it take the input from getMessage3

This method is dependent upon the (getMessage3) method.

Qualifier("3") here = 3

Print (hey from message2)

Return 3 to getMessage2

Return 3 to Qualifier("2")

Put the String(3) to Contianer

Then

Constructor MainController run

This method is dependent upon the (getMessage2) method.

Take value of Qualifier("2") here = "3" as input

Assign "3" to variable data

Print (hey from Main Controller)

Put the MainController object to Contianer

Then

getMessage1 run

This method is dependent upon the (MainController) method.

take MainController object as input

Print (hey from message1)

Return 1 to getMessage1

Return 1 to Qualifier("1")

Put the String(1) to Contianer