

What is the output?

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";
    }
}
```

The output of this code will be:

hey from message1

Q2

```
1 usage
@SpringBootApplication
public class SpringPollApplication {

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

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

    @Bean
    public String getMessage2(@Qualifier("1") String data ){
        System.out.println("hey from message2");
        return data ;
    }
}
```

The output of this code will be:

hey from message1

hey from message2

Explanation: The first method will be printed first, because the second method is @Qualifier on first.

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" ;
}
```

The output of this code will be:

Case 1:

hey from message1

hey from message3

hey from message2

Case 2:

hey from message3

hey from message2

hey from message1

Case 3:

hey from message3

hey from message1

hey from message2

Explanation: Method 3 will always be printed before Method 2 in all cases, because Method 2 is @Qualifier on Method 3.

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 {

    String data;

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

The output of this code will be:

Case 1:

hey from message1
hey from Main controller
hey from message3
hey from message2

Case 2:

hey from message1
hey from message3
hey from Main controller
hey from message2

Case 3:

hey from message1
hey from message3
hey from message2
hey from Main controller

Case 4:

hey from message3

hey from message1

hey from Main controller

hey from message2

Case 5:

hey from message3

hey from message2

hey from message1

hey from Main controller

Explanation: Method 3 will always be printed before Method 2 in all cases, because Method 2 is `@Qualifier` on Method 3, and method 1 will always be printed before MainController in all cases because it is `@Qualifier` on MainController.

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");
    }
}
```

The output of this code will be:

Case1:

hey from message3

hey from message2

hey from Main controller

hey from message1

Case1:

hey from message3

hey from message2

hey from message1

hey from Main controller

Explanation: Method 3 will be always printed before Method 2 because it is @Qualifier for Method 2 also method 2 will be printed before MainController because it is @Qualifier for MainController , and MainController will be printed before Method1 or after in other case because MainController is in container .