**Q1:**

**package** annotation;

**import** java.lang.annotation.\*;

@Retention (RetentionPolicy.***RUNTIME***)

@Target (ElementType.***METHOD***)

**@interface** Test

{

String str();

}

**class** first {

@Test(str="Test Annotation")

**public** **void** testCase() {}

}

##

**package** annotation;

**import** java.lang.reflect.Method;

**public** **class** test1 {

**public** **static** **void** main(String[] args) **throws** Exception {

// **TODO** Auto-generated method stub

first f=**new** first();

Method m = f.getClass().getMethod("testCase");

Test ts = m.getAnnotation(Test.**class**);

System.***out***.println(ts.str());

}

}

OUTPUT: Test Annotation

Q2:

**package** annotation;

**import** java.lang.annotation.Documented;

**import** java.lang.annotation.Retention;

**import** java.lang.annotation.RetentionPolicy;

@Documented

@Retention (RetentionPolicy.***RUNTIME***)

**@interface** info

{

**int** id();

String name();

String superviser();

String date();

String time();

**int** version();

}

// Applying annotation.

**public** **class** author {

@info(id = 234, name = "johan", superviser = "ajay",date="18/01/2022",time="08:20:30 hrs",version=8)

**public** **void** display()

{

System.***out***.println("Hello Jack");

System.***out***.println();

}

}

#####

**package** annotation;

**import** java.lang.reflect.Method;

**public** **class** author1 {

**public** **static** **void** main(String[] args) **throws** NoSuchMethodException, SecurityException {

// **TODO** Auto-generated method stub

author a = **new** author();

a.display();

Method m = a.getClass().getMethod("display");

info i = m.getAnnotation(info.**class**);

System.***out***.println("Author ID : " +i.id());

System.***out***.println("Author Name: " +i.name());

System.***out***.println("Superviser Name: " +i.superviser());

System.***out***.println("Date: " +i.date());

System.***out***.println("Time: " +i.time());

System.***out***.println("Version: " +i.version());

}

}

OUTPUT:

Hello jojan

Author ID : 234

Author Name: johan

Superviser Name: ajay

Date: 18/01/2022

Time: 08:20:30 hrs

Version: 8

Q3:

**package** annotation;

**import** java.lang.reflect.Method;

**import** java.lang.annotation.ElementType;

**import** java.lang.annotation.Retention;

**import** java.lang.annotation.RetentionPolicy;

**import** java.lang.annotation.Target;

@Target(value = ElementType.***METHOD***)

@Retention(value = RetentionPolicy.***RUNTIME***)

**@interface** Execute

{

**int** Sequence();

}

**class** Anno

{

@Execute(Sequence=2)

**public** **void** method1()

{

System.***out***.println("-----Method 1-----");

}

@Execute(Sequence=1)

**public** **void** method2()

{

System.***out***.println("-----Method 2-----");

}

@Execute(Sequence=3)

**public** **void** method3()

{

System.***out***.println("-----Method 3-----");

}

}

**public** **class** AnnotationExecute {

**public** **static** **void** main(String[] args) {

Anno ta = **new** Anno();

Method[] methods = ta.getClass().getMethods();

**for** (Method method : methods) {

Execute exe = method.getAnnotation(Execute.**class**);

**if** (exe != **null**) {

**try** {

method.invoke(ta);

} **catch** (Exception e) {

e.printStackTrace();

}

}

}

}

}

OUTPUT:

-----Method 3-----

-----Method 1-----

-----Method 2-----