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Dt: 20/12/2023
ContextListener.java
package test;
import javax.servlet.*;
import javax.servlet.annotation.*;
@WebListener
public class ContextListener implements ServletContextListener,
ServletContextAttributeListener{
      @Override
      public void contextInitialized(ServletContextEvent sce) {
            System.out.println("Context Object initialized....");
            ServletContext sct = sce.getServletContext();//Accessing Context
Objec_ref
            System.out.println("Application deployed into:
"+sct.getServerInfo());
      @Override
  public void contextDestroyed(ServletContextEvent sce) {
      System.out.println("Context Object destroyed...");
  }
      @Override
      public void attributeAdded(ServletContextAttributeEvent scae) {
```

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System.out.println("Attribute added to Context Object");
            String aName = scae.getName();
            System.out.println("Attribute Name : "+aName);
      @Override
  public void attributeRemoved(ServletContextAttributeEvent scae) {
      System.out.println("Attribute removed from Context Object");
Note:
 =>Add ContextListener.java program into Cookie Session tracking Application.
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RequestListener.java
package test;
import javax.servlet.
import javax.servlet.annotation.*;
@WebListener
public class RequestListener implements ServletRequestListener,
ServletRequestAttributeListener{
      @Override
     public void requestInitialized(ServletRequestEvent sre) {
```

```
System.out.println("Request Object initialized....");
      }
      @Override
  public void requestDestroyed(ServletRequestEvent sre) {
      System.out.println("Request Object destroyed...");
  }
      @Override
     public void attributeAdded(ServletRequestAttributeEvent srae) {
            System.out.println("Attribute added to Request Object...");
            String aName = srae.getName();
            System.out.println("Attribute Name:"+aName);
     }
      @Override
  public void attributeRemoved(ServletRequestAttributeEvent srae) {
      System.out.println("Attribute removed from Request Object...");
  }
SessionListener.java
package test;
import javax.servlet.http.*;
import javax.servlet.annotation.*;
@WebListener
```

```
public class SessionListener implements HttpSessionListener,
HttpSessionAttributeListener{
      @Override
     public void sessionCreated(HttpSessionEvent hse) {
            System.out.println("Session Created...");
      }
      @Override
  public void sessionDestroyed(HttpSessionEvent hse) {
      System.out.println("Session destroyed...
  }
      @Override
      public void attributeAdded(HttpSessionBindingEvent hsbe) {
            System.out.println("Attribute added to Session...");
            String aName = hsbe.getName();
            System.out.println("Attribute Name:"+aName);
      @Override
      public void attributeRemoved(HttpSessionBindingEvent hsbe) {
        System.out.println("Attribute removed from Session...");
}
Note:
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=>Add RequestListener.java and SessionListener.java to HttpSession tracking
application.
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