1. **Session 5: Polymorphism and String Class**
2. **Intended Learning Outcome:**
   1. Will learn about one of the core concept of OOP – Polymorphism
   2. Will learn about packages in java.
   3. Will learn about String Class implementation.
3. **Expected skills:  
   -** can explain Polymorphism.  
   - knows about multiple inheritance.  
   - knows about interface  
   - can implement interfaces in code using implements keyword.  
   - Knows the difference between Java String and C string.  
   - can implement String in code.  
   - can do basic operations on string.
4. **Tools Required:**
   1. JDK   
      b. ECLIPSE / NETBEANS
5. **Session Detail:**1. Teacher will give lecture on Java packages. (20 minutes)

2. Teacher will give lecture on polymorphism and give multiple real life examples on them. (40 minutes)  
3. Teacher will talk about the difference between abstract class and interface. (20 minutes)  
4. Teacher will draw some UML that has polymorphism and tell the students to code them (20 minutes)   
5. Project Mentors Session – String (60 minutes)

1. **Post Lab Exercise:**

|  |
| --- |
| *Animal* |
| # name: String |
| + Animal (String)  + *move (): void* |

|  |
| --- |
| Test |
|  |
| + main (String [ ] ): void |

|  |
| --- |
| Dog |
| - color: String |
| + Bird (String) |

|  |
| --- |
| Cat |
| - size: String |
| + Fish (String) |

1. **Further Readings:**
   1. <https://www.tutorialspoint.com/java/java_polymorphism.htm>
   2. <http://www.javatpoint.com/runtime-polymorphism-in-java>