Steps to Compile and Create a JAR File

1. **Ensure Your Java Files are Set Up Correctly**

   Make sure you have the following files:

   Utils.java

   ```
   package com.mphasis.utils;

   public class Utils {
       public static void printMessage() {
           System.out.println("Hello from Utils!");
       }
   }
   ```

   MainApp.java

   ```
   package com.mphasis.utils;

   public class MainApp {
       public static void main(String[] args) {
           Utils.printMessage();
       }
   }
   ```

2. **Compile Your Java Files**

   Use the `javac` command to compile your Java files into `.class` files. This command compiles both `Utils.java` and `MainApp.java` and places the resulting `.class` files in the `E:\mphasisTraining\MyProject\classes` directory.

   Open a command prompt and execute:

   ```
   javac -d E:\mphasisTraining\MyProject\classes
   E:\mphasisTraining\MyProject\src\com\mphasis\utils\MainApp.java
   E:\mphasisTraining\MyProject\src\com\mphasis\utils\Utils.java
   ```

   Explanation:

   - `-d E:\mphasisTraining\MyProject\classes` specifies the destination directory for the compiled `.class` files.
   - The paths to `MainApp.java` and `Utils.java` are the source files to compile.

3. **Create the Manifest File**

   Create a manifest file named `MANIFEST.MF` in the `E:\mphasisTraining\MyProject` directory. This file should include the `Main-Class` attribute to specify the entry point for your JAR.

   Content of `MANIFEST.MF`:

```
Manifest-Version: 1.0
Main-Class: com.mphasis.utils.MainApp
```

Save this file in the `E:\mphasisTraining\MyProject` directory.

4. **Create the JAR File**

   Use the `jar` command to create a JAR file. Make sure you are in the `E:\mphasisTraining\MyProject` directory or specify the full path to `MANIFEST.MF`.

   Run:

   ```
   cd E:\mphasisTraining\MyProject
   jar cfm myapp.jar MANIFEST.MF -C classes .
   ```

   Explanation:

   - `c` = Create a new JAR file.
   - `f` = Specify the filename (`myapp.jar`).
   - `m` = Include the manifest file (`MANIFEST.MF`).
   - `-C classes` = Change to the `classes` directory and include its contents in the JAR.
   - `.` = Include all files from the `classes` directory.

5. **Verify the JAR File**

   Check the contents of the JAR file to ensure it includes the correct class files:

   ```
   jar tf myapp.jar
   ```

   You should see output like:

   ```
   com/mphasis/utils/Utils.class
   com/mphasis/utils/MainApp.class
   ```

6. **Run the JAR File**

   Execute the JAR file to ensure it works as expected:

   ```
   java -jar myapp.jar
   ```

   This should print:

   ```
   Hello from Utils!
   ```

Summary

1. **Compile Java Files:**

```
javac -d E:\mphasisTraining\MyProject\classes
E:\mphasisTraining\MyProject\src\com\mphasis\utils\MainApp.jaa
E:\mphasisTraining\MyProject\src\com\mphasis\utils\Utils.java
```

2. **Create the Manifest File:** MANIFEST.MF
3. **Create the JAR File:**

```
cd E:\mphasisTraining\MyProject
jar cfm myapp.jar MANIFEST.MF -C classes .
```

4. **Verify and Run the JAR File:**

```
jar tf myapp.jar
java -jar myapp.jar
```

By following these steps, you should be able to compile your Java files, create a JAR file, and run it successfully.