

Smart Programming : YouTube Channel

An investment in Knowledge pays the best interest....

**Smart Programming**
We Educate - We Develop

+91 62838-30308
Call us to Learn
Latest Technologies
City : Mohali (Punjab),
& Chandigarh
(India)

WEBSITE : <http://www.smartprogramming.in>

BUY COURSES ON : <https://courses.smartprogramming.in>

YOUTUBE CHANNEL : Smart Programming (<https://www.youtube.com/c/SmartProgramming>)

ANDROID APP : Smart Programming
(<https://play.google.com/store/apps/details?id=com.smartprogramming>)

 <https://www.facebook.com/smartprogramming.india>
 https://www.instagram.com/smart_programming



Jar File & MANIFEST.MF File
in Java

=> Jar Files :-

- > Full form of JAR is Java Archive
- > Jar file is used to aggregate .class files, metadata, packages, images, audio files etc into one file so that we can distribute it on java platform
- > Jar file is the compressed form of all the resources (.class, packages, metadata, images, audio etc)
- > How to create jar file :-
 - = jar -cf JarFileName.jar file_names (cf is create file - cvf create verbos file)
 - = jar -cf JarFileName.jar *
- > How to view jar file content :-
 - = jar -tf JarFileName.jar (tf is table format or tableview in file)
- > How to extract jar files :-
 - = jar -xf JarFileName.jar (xf is extract file)

-> How to update jar file :-

= jar -uf JarFileName.jar

-> How to run jar file :-

= java -jar JarFileName.jar

=> **MANIFEST.MF File :-**

-> Manifest is the file which is present in every jar file which represents the features of jar file

-> Whenever we create jar file, MANIFEST.MF file is created automatically in META-INF folder

-> The default Manifest file contains only 2 entries in the form of name-value pair but we can insert more values in MANIFEST.MF file

-> How to insert data in MANIFEST.MF file :-

1. Create any txt file with any name and provide values in it using name-value pair

2. Then provide the command in CMD :-

```
jar -cfm JarFileName.jar  
TextFileName.txt *
```

-> Points to remember :-

1. We have to provide the space after name and colon

2. If we provide any .class file name in text file then we should not include .class at the end of ClassName

3. We should always add newline at the end of text file

=> Executable Jar File :-

-> If any jar file contains the main class (the class which contains the main method) is known as executable jar file

-> To create executable jar file, we have to provide Main-Class name value pair in manifest file

-> How to run executable jar file form CMD :-

```
java -jar JarFileName.jar
```

=> Package Sealing :-

-> We can seal a package in java to ensure that no further classes can add themselves to it.

-> For example we can use package sealing to ensure version consistency among the classes in our software

-> How to achieve package sealing :-

We have to add name-value pair in
MANIFEST file i.e Sealed: true

=> Batch File :-

- > A batch file is a script file in windows or DOS
- > A batch file contains a series of commands
- > Extension of batch file is .bat

We Educate
We Develop



Company Links & Contacts

Company Name: Smart Programming (+91 62838-30308)

Address : Chandigarh & Mohali (Punjab), India

Websites: <https://www.smartprogramming.in/>
<https://courses.smartprogramming.in>

Android App:
<https://play.google.com/store/apps/details?id=com.smartprogramming>

YouTube Channel:
<https://www.youtube.com/c/SmartProgramming>