Welcome to the training on open source Overview.

In this video you will be learning about open source software.

The agenda of this video is to understand open source Software,

Know different categories of open source software,

Use of open source software,

Software development within the organization, Risks involved using open source software in commercial products,

Different open source scanning tools available in market,

And the final conclusion.

We will start with understanding what open source software is.

The term open source has existed for a long time.

I will start with a simple example of a software.

When you build a software, you write code. Lots of code is involved in it and we call this as source code. Basically a source code is a set of code using which a software is built. So the source code is the building block.

Consider a person P, or a company C , built this software and he want to share the software to the public.

What he/she does is, he/she will compile the source code into binary format, and gives the software in the binary format to the public. The binary file can be executed in different machines but if you want to change the source code and make it the way you wanted it to work, this will not be possible. So this is not an open source software.

Now will go with the open source definition.

Definition says The Open Source Software (0SS) is available without any cost along with the source code, but at the same time, it comes along with licensing obligationsthat must be fulfilled ".

A software which is freely available to the public along with the source code is open source software.

Where you are free to access the code, modify it and release it with your own versions.

Each open source will be released under an open source license.

So what is license? License is a permit to use something or it gives authorization to use something.

Each open source license comes with different Obligations, which need to be fulfilled when you are using open source in your product.

What is an Obligation?

By definition it is an act or course of action to which a person is morally or legally bound.

We generally divide the licenses into 2 main categories restrictive licenses and nonrestrictive licenses.

The below picture describes how open source software is built.

Here we can see, an Open source community participates, or contributes to open source projects and it uses the open source development approach.

And the developed software contains various tools using which code is developed, and the various open source components used to develop the functionality.

And finally the open source software is released under open source license.

OSI - open source initiative organization dedicated to promoting open-source software .

OSI - defines open source terminologies.

These are the important terms which commonly appear when you are using open source software. You can go through these definitions.

Basically A free software which will not restrict any party from selling or redistributing code.

Source code : is code which need to be distributed along with the product as per license obligation.

Derived work : License must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.

No Discrimination Against Persons or Groups : So , license must not discriminate against any person or group of persons.

No Discrimination against Fields of Endeavor : The license must not restrict anyone from making use of the program in a specific field of endeavor.

For example, license may not restrict the program from being used in a business, or from being used for genetic research.

We have listed the advantages of using open source software.

Cost efficient: Basically open source license comes With free of cost. When you use Open source code in your product you don’t have to buy expensive license.

Flexibility: Open source software is flexible because you have the freedom to modify the code and use it as per your requirement.

Availability of the source code : Since source code of the software is available along with the product No time and effort is required to build the application from scratch.

There are some risks involved using open source in commercial applications.

Proprietory content and IP loss:

Using certain licenses entitles your to share any unique IP with everyone, which leads to IP loss.

Loss of reputation:

Using certain code containing specific restrictive licences unknown to the firm/company, can later lead to litigations and the firm/company can have loss of reputation.

Monetary damages:

Due to litigations from using restrictive open source licences in any proprietory commercial software, there can be huge monetary losses and also lead to entire product recall.

In our next video we will discuss about the different categories of open source.