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e1: Video - Windows Setup

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Hi and welcome to the next topic of this module. In this topic, we will setup software for Windows.

Now if you are using Mac or Linux Operating system then please skip this topic and directly go to the next topic.

Because this topic is only for learners who are using Windows.

**MM**

So in this topic, we will download Java.

**MMM**

Now to setup Java in your system, you need to download **MMM** JDK.

Well, JDK stands for Java Development Kit. And this JDK contains JRE, which stands for Java Runtime Environment.

Basically, we need just JRE to run Eclipse IDE in our system. But for the sake of simplicity, I will download the entire JDK which will give us JRE. Fine?

So let’s get started.

**DEMO**

Now let’s open our browser and navigate to Google.com.

And then search for JDK for windows.

It will show you the first link from oracle.com ---- open it

You will land on this page. Just make sure this downloads tab is selected.

And then click on this Java icon over here.

Scroll down a little bit.

Here you will find the latest java version ready for download. Now depending on the time you are watching this video, the java version might vary. But please don’t worry about it. Downloading different java version won’t affect our training objective.

So just accept the license agreement.

And here you will find two download option for windows. One is the exe file and other is the zip file. Make sure you download the exe file.

Just click on it. And your download will start.

Just wait for the download to complete.

UP NEXT

Once your download completes, move to the next video where we will complete the installation process.

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e2: Video - Java Installation

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SLIDE

In this video, we will complete the Java installation.

DEMO

So this is the file which I downloaded in the last video.

Let’s double click to launch it.

It will open up the installation wizard.

Click on next

Now you have to note the location where the installed Java files will be stored. For me, it is this path. In your case, it might be different. So please make sure you note this location because we will need it later.

So again click on next

So yes our installation is complete.

Now our next step will be to make java globally accessible by all the application present in our operating system. So this will allow us to run Eclipse IDE in our system.

For that, you need to navigate to the location where your Java is installed. Remember during installation, I told you to note down the location where your java has been installed.

For me the location is,

C drive

Program files

Java

So here is the jdk folder --- open it …. --- and then open this bin folder

Now here, to the right of bin ---- just click here

This will allow you to copy the path. Just copy it.

Now please note that in your case this bin folder location could be different. But it doesn’t matter. Just copy the complete path.

And then right-click on this PC icon --- select Properties --- then advanced system settings ---- Environment variables

And here at the bottom, you will find a Path variable …. Now in your case this variable name could be all in capital letters or all in small letters. But don’t worry the name is case insensitive. Just select it and click on Edit.

Then click on new ---- here just paste the copied URL to the bin folder. And then click on OK.

Again OK and again OK at the end.

Now to check if everything is in place or not, just open the Command Prompt

And type Java -version and hit enter.

So here we go, we have successfully installed in our system. And this is the run time environment which we need to run Eclipse IDE.

So yes that’s all for this video.

In the next video, we will install the required compiler.

In the next video, we will download the required compiler.

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e3: Video - MinGW Download

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In this video, **MM** we will install the required compiler for windows.

Now as mentioned earlier, we are going to use GCC compiler.

But on windows, if you want to Setup GCC compiler **MM** then you need to download and install MinGW tool.

Well, MinGW stands for “**Minimalist GNU for Windows**” and once you set up MinGW, you will get the required GCC compiler installed in your system.

So let’s get started.

TODO VO:

Now, if you have already installed this tool sometime earlier in your system, then you will get this window in front of you. You can just click on the reinstall button to reinstall it. There is no harm in that. And this will install the latest version in your system. But if you don’t get anything like this then your installation process will automatically start. Just wait for the process to complete and during the installation process, make sure you have active internet connection.

AFTER INSTALLATION COMPLETES A NEW WINDOW COMES UP

Then finally you will get this window. So here, firstly make sure this Basic Setup is selected.

And on the right, you will get these packages to install in your system. I am only concerned about these two packages. Now in case if these two are marked as GREEN like you can see here. Then it means, you don’t have to do anything further. In your case, the compiler is already installed.

But in case if these two are not marked GREEN, then you need to follow the steps along with me.

So from the given packages, just select

**UP NEXT**

So in the next video, we will download Eclipse IDE.

<https://osdn.net/projects/mingw/downloads/68260/mingw-get-setup.exe/>

mingw32-base

Mingw32-gcc-g++

Installing required packages might take some time depending on your internet bandwidth.

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e4: Video - Eclipse IDE Download

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e6: Video - Creating First C Project

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Workspace name: c-training

Project name: learn-programming

Source file: learn-programming.c

In this video, we will create our first project in C. Let’s get started.

DEMO

So far we have completed the installation process. Now, if you have by mistake closed this welcome prompt then you can just launch your Eclipse IDE again.

So just go to windows, search for Eclipse

Well, if you are unable to see eclipse app in your search results, then you can go to Apps tab

You will find the app here. But if you are still unable to see the app here, then

FADE

Launch Eclipse:

* **Windows:** Show where to find eclipse.exe
* Search in windows
* Apps tab
* Go to the installed location
  + Create a shortcut to launch it
* **Mac:** Show where to find eclipse
  + CMD + space - launch eclipse

Welcome prompt: Don’t say prompt. Just say “when you launch it it will show you the path to the default workspace”.

* Talk about what is a workspace
* Create a new folder in desktop
  + Windows: Use File explorer
  + Mac: Use Finder window
  + Talk about why the name is **learn-programming**

Now in this training whenever we will create a new file or folder, we will use the same naming convention. Such as all words in the small case and join multiple words by using hyphens. Fine?

Welcome screen:

* This is the welcome screen. I will just close it.
* So this is how our eclipse IDE looks like.

Let’s not waste time and let’s create our first project in C.

LEFT PANEL UNDER PROJECT WINDOW

Well, on the left you will find a few options to create a new project.

If you go to file → new, you will find the same options for creating new project. Among these, there is an option to create a new C/C++ project. Creating a C project using this option is bit tricky. Since this is a beginner Training I will use this simple option “Create a project” OR “Project...”. Let’s click it.

**You will get this wizard in front of you.**

Now, Expand this C/C++

There you will find this C project. Select it. Click on next.

**NEXT WIZARD**

Now here, you need to enter the name of your project.

**TVT** Name it learn-programming

Since our objective is to learn the fundamentals of C programming, so let’s name it somewhere close to our objective such as learn-programming

So this will be our project name.

Then here you will find **executable**, just expand it and you will get two option, the first is Empty project. If you create a C project using this option, then your project won’t contain any default source code.

And if you select HELLO WORLD ANSI C PROJECT, then it will by default create a C program file for you having some code. So let’s go for this option. And then on the right you will find two compilers.

Make sure you select MacOSX GCC compiler OR MinGW GCC compiler which we installed just now.

Then click on FINISH.

This will create your new project and it will automatically open a file in front of you which contain some code. Well, right now don’t worry about them. I will discuss them shortly.

But right now I want you to remove these code written in this file completely. And just below the video, you will find a link. I want you to open that link. There you will find some code. Just copy those code and paste it in this file.

Like this.

Now throughout this training, wherever required I will ask you to go to the link present below the video and get the required code which will be needed to get started with a particular topic.

This will make your learning experience better. So instead of typing the same kind of code, again and again, you can just focus on learning a new concept in each video. Fine?

Now, please don’t worry about the code written in front of you. We will discuss about writing programs throughout the training. So before that, it is very important for us to know about the tools and functionalities of our IDE.

So in the next video, we will explore basic functionalities of Eclipse IDE.

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e7: Video - Exploring Eclipse IDE

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It is very important for a programmer to know about the basic functionalities of the IDE which he is using. **MM** So in this video, we will explore how to use Eclipse IDE and do the basic setups.

DEMO Eclipse

**MAC:** Now first thing first, right now by default my eclipse has Dark theme. In your case, the eclipse might have a light theme. So let us first set the theme of our IDE that suits our eyes.

**WINDOWS:** Now first thing first, right now by default my eclipse has Light theme. In your case, the eclipse might have a dark theme. So let us first set the theme of our IDE that suits our eyes.

**MAC:** Go to **Eclipse > Preferences**, Expand **GENERAL** and click on **Appearance**. Now make sure you do not expand this **Appearance**. Just click it and on the right, you will find a dropdown to select the theme. You can select a theme of your choice. My preference is this **Light** theme. So I will select it and then click on **Apply**. And it will ask you to restart eclipse to apply theme change in your entire IDE. Click **Ok**. and then **apply and close**.

**MAC:** So I will now go to FILE > and click Restart. It might ask you to save the unsaved changes. Click Save.

Once your Eclipse restarts it again show you the welcome screen. If you don’t want to see this screen each time you start eclipse, then you can simply uncheck this option. Fine? And then close it. Great!

**WINDOWS:** Go to **Window > Preferences**, Expand **GENERAL** and click on **Appearance**. Now make sure you do not expand this **Appearance**. Just click it and on the right, you will find a dropdown to select the theme. You can select a theme of your choice. My preference is this **Light** theme. So I will select it and then click on **Apply**. And it will ask you to restart eclipse to apply theme change in your entire IDE. Click **Ok**. and then **apply and close**.

**WINDOWS:** So I will now go to FILE > and click Restart. It might ask you to save the unsaved changes. Click Save.

Once your Eclipse restarts it again show you the welcome screen. If you don’t want to see this screen each time you start eclipse, then you can simply uncheck this option. Fine? And then close it. Great!

**MAC and WINDOWS:** Now this entire eclipse window in front of you is known as **Workbench**.

In this workbench, we have a lot of tools that will help us to write programs. I will walk you through the most important ones.

In this workbench, on to the left, you will find this **Project Explorer View**. That contains our project. Now in case if you are unable to see this **Project Explorer** here, then go to **WINDOW > SHOW VIEW > Select PROJECT EXPLORER**. You will get it here. Fine?

Now if you expand your project, it contains a **src** folder. Well, **src** stands for **SOURCE**. And this source folder contains our program file whose name is the same as that of the project name. If you double click this file, it will open the file in the editor area of the workbench. I.e. in the centre. And this file contains some code.

Now, this file present under the source folder is known as SOURCE FILE. and this file contains some code --- which is known as SOURCE CODE. This is something you need to remember.

CALLOUT

This is a source file, and this is source code. Now, the file that contains a C program always has an extension of .c. So this source file, if you notice has a file extension of .c. Fine? Again you need to remember this.

Well, right now the size of the font is very small. So I will increase the font size of my editor.

**MAC:** I will again to to Eclipse > PREFERENCES. Under General, expand APPEARANCE. There you will find COLORS AND FONTS. Just select it and then at the top you will find BASIC. Just expand it. Here you will find TEXT FONT. Select it and click on edit.

**MAKE IT 16 or as per your convenience.**

You can also change the font family or typeface as per your wish. But I will keep it the default.

Now, along with this, I want you to do one more thing. Under DEBUG you will find, CONSOLE FONT. Let’s change it as well to size 18.

Now what is CONSOLE FONT, I will let you know shortly. Once you make changes, click on APPLY. And then APPLY and CLOSE.

Great. So now our code quite visible. At least better than before.

**WINDOWS:** I will again to WINDOW > PREFERENCES. Under General, expand APPEARANCE. There you will find COLORS AND FONTS. Just select it and then at the top you will find BASIC. Just expand it. Here you will find TEXT FONT. Select it and click on edit.

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Now what is CONSOLE FONT, I will let you know shortly. Once you make changes, click on APPLY. And then APPLY and CLOSE.

Great. So now our code quite visible. At least better than before.

**MAC AND WINDOWS:** Now what about the console font which I also changed just now. Well, just below the editor, you will find 4 default tabs opened for you. These are basically Problems View, Tasks View, Console View and Properties View. In case you can’t see these 4 tabs here, then go to **WINDOW > SHOW VIEW** and here one by one select the Views which you cannot see opened here at the bottom. Fine?

**TTT OPEN CONSOLE TAB**

Now as we proceed with this training, you will gradually understand the significance of these Views. But since we have increased the font size of CONSOLE text, then let me brief you little about this.

Well, we will run our C program and try to print something in the output then, you will get all the output in this CONSOLE tab. So the text here in this View should be visible right? So that is why I increased the console text size. Fine?

Now to the right of our workbench, you will find this outline View and a few other tabs. Well, we don’t need them for now, so I will just minimize these tabs for now. At any point of time if we need them, then I can just restore this by RESTORE icon. Fine? But for now, let’s minimise it.

Great!

Now one last thing, at the top of the workbench, we have workbench Toolbar. Well, this toolbar contains a lot of buttons, that will help us to RUN our program, DEBUG our program, save the changes made to our file and so on and so forth.

As we proceed with this training we will gradually explore how to use them. So for now, let’s not worry about them.

So yes that’s pretty much it for this video.

**UP NEXT**

Up next, we will see the software installation and setup process for macOS.