



Andhra Pradesh State Skill Development Corporation



Embedded systems

Project Creation in Keil U

vision 4



Project Creation in Keil U vision 4

How to write a program in Keil for 8051

In this topic we deal with the programming of 8051 micro controller. And also learn how to write a program in Keil.

For AT89C51 programming we used a Keil μ Vision software.
Programming can be C, C++ or in any another language

Steps to use the Keil

open the Keil μ Vision, and follow these steps:

- For any new project, click on Project>> New μ Vision Project.
- A new window will display on screen which will prompt for project name and directory. Give a name to your project.
- When you click on save button, a new window will appear naming “Select Device for Target ‘Target 1’”. Now we have to select specific microcontroller. Here, we have to use 8051, which belong to Atmel family, so double click on Atmel. All Atmel microcontrollers will get available. Select AT89C51 and then click on OK.
- When you click on OK, another window will appear which will ask for “Copy Standard 8051 Startup Code to Project Folder and Add File to Project?” Click on YES to proceed further.
- If we see on left side of screen i-e, in ‘Project workspace’ you can see ‘STARTUP.A51’ file. It is the file which contains the assembly language commands of 8051 microcontroller. Leave it just as it is, because we have to first set option values for target1.
- To configure option value of our microcontroller project. Select the Target 1, click on Project>>Option for target ‘target 1’.
- Select Target tab to configure microcontroller. Change the crystal value from 24 MHz to 12 MHz and go to output tab.
- In Output tab, check the “create HEX file” option and then click OK.
- Now click on File << New. Or simply create new file. Blank text file will open and we have to write our code in it. After writing the code, save this file and the most important thing is to give extension of .c or .asm (according to the language used for program) in file name.
- Right click the target and select manage components. From the Project component tab >> select STARTUP.A51 >> click add files.



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- Add saved file and close the components window by clicking OK.
- Now we are again on the code. Just click on the “Rebuild all target files” from tool bars. We can also choose Project << Rebuild all target files. By clicking this button our program will start compilation and give the compilation results at bottom output window. If our code is correct then there will be no errors.
- Now the hex file is created in the specified folder with “.hex” extension. We can burn it in microcontroller through Fly pro software and burner circuit.



