



WIPRO NGA Program – DWS

Capstone Project Presentation – 17th June & 18th June
2025

Project Title Here - **Embed License File into MSI**

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Introduction

The goal of this project is to embed a license agreement file into a Microsoft Installer (MSI) package and configure it to display during installation. The MSI is built using the **WiX Toolset**, an open-source Windows Installer XML toolset and modified using **Orca**, a Microsoft-provided MSI editing tool.

Project Requirement

Operating System: Windows 10 / 11 (x64)

Tools & Software:

- 1) **WiX Toolset** (Installer Framework)
- 2) **Orca** (MSI Table Editor)
- 3) **Visual Studio Code / Notepad** (for editing .wxs)
- 4) **Command Prompt** (Admin mode for compiling)

Files:

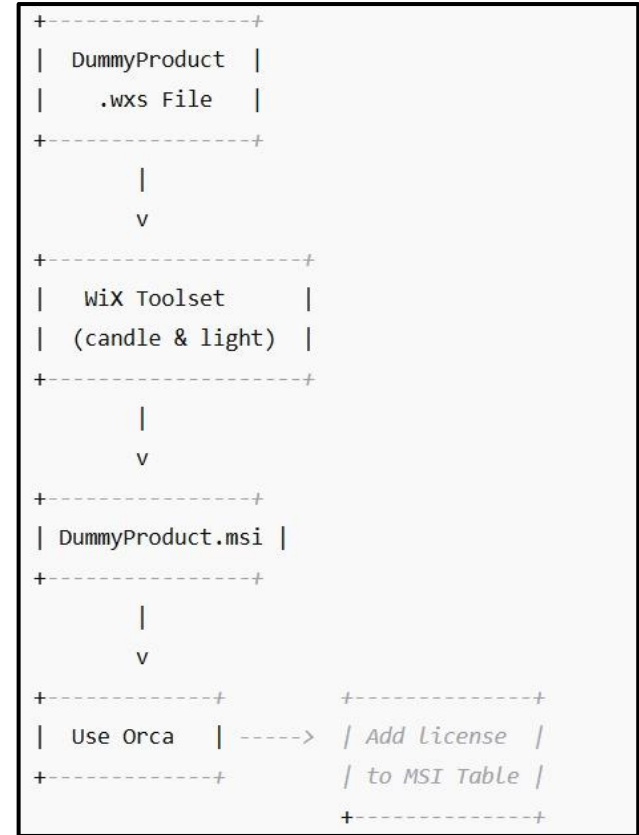
- 1) license.key (custom license file)
- 2) DummyProduct.wxs, .msi

Introduction to Tools

- **WiX Toolset:** Converts XML files to MSI using candle (compiler) and light (linker).
- **Orca:** Used to directly edit MSI database tables to embed files or change metadata.
- **Visual Studio Code / Notepad:** Used for editing .wxs (WiX source files).
- **Command Prompt:** Execution environment for compiling and linking WiX source files.

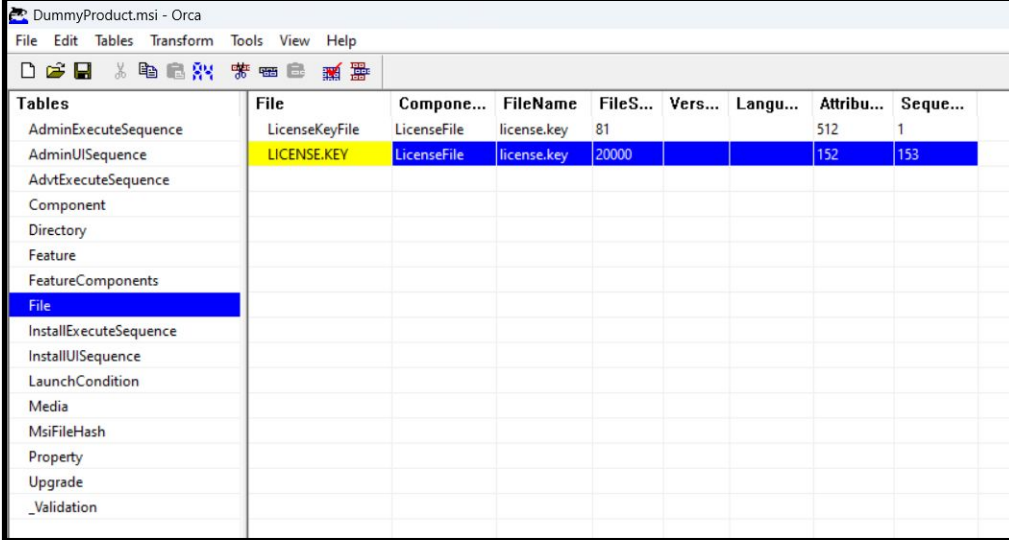
Flowchart Diagram

- **Modify .wxs File:** Define the installer structure and include reference to `license.key`.
- **Compile with candle:** Converts `.wxs` to `.wixobj`.
- **Link with light:** Generates the `.msi` installer from `.wixobj`.
- **Open MSI in Orca:** Use Orca to manually edit the MSI file.
- **Embed license.key:** Add the license file into the MSI's file table.
- **Save Final MSI:** The MSI now includes and can display the license during installation.



Usage Process

- Download WiX Toolset
- Install WiX
- **Download Windows SDK and install Orca**
- **Download a Dummy MSI Project**
- **Build MSI**
- **Use Orca** to embed license.key.
- Save and test



The screenshot shows the Orca MSI editor window titled 'DummyProduct.msi - Orca'. The 'Tables' pane on the left lists various MSI tables, with 'File' selected. The main pane displays the 'File' table with the following data:

File	Compone...	FileName	FileS...	Vers...	Langu...	Attribu...	Seque...
LicenseKeyFile	LicenseFile	license.key	81			512	1
LICENSE.KEY	LicenseFile	license.key	20000			152	153

Execution Overview Steps

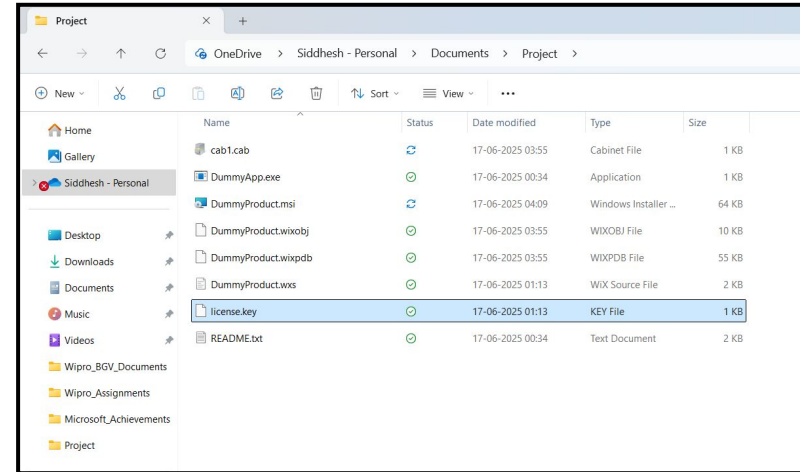
- Install **WiX Toolset** from GitHub.
- Set the WiX environment path in the system variables.
- Install **Windows SDK**, extract and install **Orca** from:
C:\Users\<user>\Downloads\Windows Kits\10\WindowsSDK\Installers
- Create a project directory and unzip a dummy MSI project.
- Add a custom license.key file to the directory.
- Modify the DummyProduct.wxs to include reference to the license.

Compile and link using:

- candle DummyProduct.wxs
- light DummyProduct.wixobj -o DummyProduct.msi

Open DummyProduct.msi in Orca and embed license.key under the **File Table**.

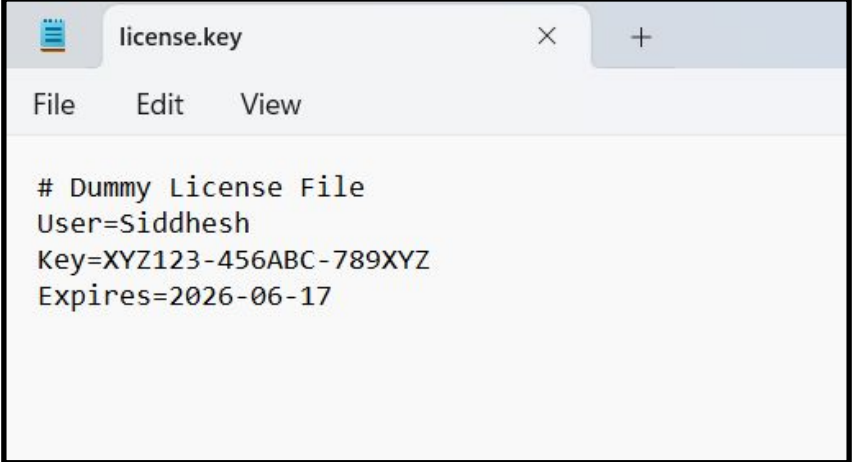
Save the modified .msi.



Analysis Result

Analysis Result:

- License file is embedded in MSI: Yes
- MSI built and runs on Windows 10/11: Yes
- User is able to see license in UI: Yes

A screenshot of a text editor window titled 'license.key'. The window has a menu bar with 'File', 'Edit', and 'View'. The text content is as follows:

```
# Dummy License File
User=Siddhesh
Key=XYZ123-456ABC-789XYZ
Expires=2026-06-17
```


Technologies / Tools Used

Technologies/Tools Used:

- **WiX Toolset:** Used for creating and compiling MSI file
- **Visual Studio Code / Notepad:** Used for authoring .wxs file
- **Command Prompt:** Used for build commands

Getting started

You can get the Windows SDK in two ways: install it from this page by selecting the download link or by selecting "Windows 11 SDK (10.0.26100.0)" in the optional components of the Visual Studio 2022 Installer. Before you install this SDK:

- Review all [system requirements](#)
- Exit Visual Studio prior to installation.
- Review the [Release notes](#) and [Known Issues](#) below for the latest updates.

[Download the installer >](#)

[Download the .iso >](#)



Resources / References

- <https://developer.microsoft.com/en-us/windows/downloads/windows-sdk/>
- <https://github.com/wixtoolset/wix3/releases>
- <https://openai.com/index/chatgpt/>
- <https://learn.microsoft.com/>