

# NetBeans 4.1

## - An Introduction to MIDP



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# NetBeans 4.1

- Graphical User Interface (GUI)
- Easy to use, Debugger, Error correction
- Various technologies support at single platform



# Multiple Technologies

- General Java Applications
- Web Services (Server)
- Web Applications (Client)
- Enterprise Applications
- J2ME MIDP Application



# Basic J2ME Application

- Basic steps to follow to create:
  - A new project system
  - Two ways to create J2ME MIDP project name “MYHello”
  
- Result
  - “MyHello” displays the text “HELLO WORLD” in the emulator device



# Requirements

- NetBeans IDE 4.1

(Should be installed first)

- NetBeans Mobility Pack 4.1

The Mobility Pack includes the J2ME Wireless Toolkit, version 2.2

<http://www.netbeans.info/downloads/download.php?type=4.1>



# Creating a MIDP Application

- The NetBeans IDE provides a wizard that enables you to quickly create a MIDP project.
- Two methodologies to develop project
  - develop application in the **MIDP Visual Designer**
  - develop in the **Source Code Editor**



# MIDP Visual Designer

- Ability to graphically plan out the flow of the application
- Design the screens the application will use
- The designer automatically creates the code for the application
  - Limitation: Cant edit code in Visual Designer



# Source Code Editor

- Manually create the code for MIDlets
- More flexibility when editing the code
- Create preprocessor code blocks



# MIDP Application Using the Visual Mobile Designer 1/2

## ■ Creating a new J2ME MIDP project

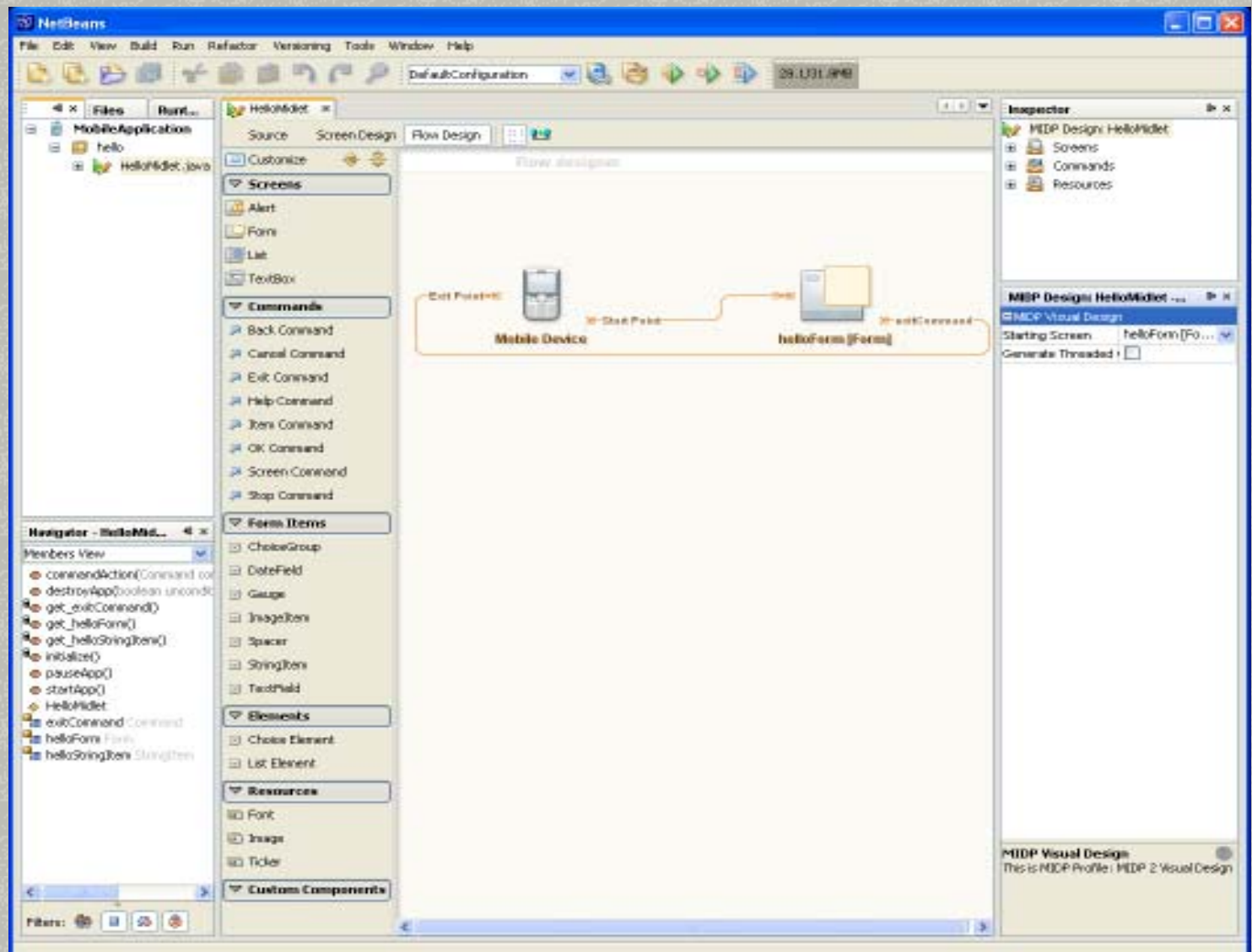
1. Choose File > New Project (Ctrl-Shift-N). Under Categories, select Mobile. Under Projects, select Mobile Application and click Next.
2. Enter MyHello in the Project Name field. Change the Project Location to any directory on your system. From now on, we will refer to this directory as \$PROJECTHOME.
3. Check the Set as Main Project and Create Hello MIDlet checkboxes (both are checked by default). Click Next.



# MIDP Application Using the Visual Mobile Designer 2/2

4. Leave the J2ME Wireless Toolkit as the selected Target Platform.
5. Click Finish. The IDE creates the \$PROJECTHOME./MyHello project folder. The project folder contains all of your sources and project metadata, such as the project Ant script. The application itself is displayed in the Flow Design window of the Visual Mobile Designer.

# Visual Mobile Designer Screen Shot





# Editing the Java Source Code

## ■ Edit the text MIDlet displays

1. Click on Screen Design.  
This opens the Screen Designer window, and displays the helloTextBox[Textbox] screen, which is the only screen available in the application.
2. Click on the helloTextBox screen and type in some text. The default text is, "Hello, World!"



# Compiling and Running a Project

1. Choose Run > Run Main Project (F6) from the Run menu. Double-click the Output window to maximize it so you can see all the output. Note that the HelloMIDlet.java file is built before it is executed. A device emulator opens to display the results of the executed MIDlet. The default device emulator is DefaultColorPhone.
2. In the device emulator window, click on the button below the Launch command. The device emulator launches the MIDlet and displays the text you entered in the source code.
3. Click on the button below Exit to close the MIDlet. Then click on the button in the upper right corner of the device to close the emulator window.



# MIDP Application Using the Source Editor 1/2

## ■ Creating a new J2ME MIDP project

1. Choose File > New Project (Ctrl-Shift-N). Under Categories, select Mobile. Under Projects, select Mobile Application and click Next.
2. Enter MyHelloMIDlet in the Project Name field. Change the Project Location to any directory on your system. From now on, we will refer to this directory as \$PROJECTHOME.
3. Check the Set as Main Project checkbox and remove the check from the Create Hello MIDlet checkbox. Click Next.
4. Leave the J2ME Wireless Toolkit as the selected Target Platform.



# MIDP Application Using the Source Editor 2/2

5. Click Finish. The IDE creates the \$PROJECTHOME./MyHelloMIDlet project folder. The project folder contains all of your sources and project metadata, such as the project Ant script.
6. Right-click the MyHelloMIDlet node in the Explorer window and choose New > File/Folder.
7. Under Categories, choose MIDP. Under File Types, choose MIDlet. Click Next.
8. Enter HelloMIDlet as the MIDlet name. Click Finish. The HelloMIDlet.java is created.
9. Double click the HelloMIDlet.java to display the source code in the Editor.
10. Click in the Source Editor and change



# Editing the Java Source Code

- Edit the text MIDlet displays
  1. In the startApp() method, replace the "test string" code with the text of your choice. For example, "Hello World."



# Compiling and Running a Project

1. Choose Run > Run Main Project (F6) from the Run menu. Double-click the Output window to maximize it so you can see all the output. Note that the HelloMIDlet.java file is built before it is executed. A device emulator opens to display the results of the executed MIDlet. The default device emulator is DefaultColorPhone.
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# Changing the Emulator Platform

- You can create different project configurations to test your MIDlet on different emulator platforms.
- 1. Right-click the MyHello Project node and choose Properties. In the Properties dialog, choose the Platform node. You can change the device for the default configuration.
- 2. Click the Device dropdown menu and choose QwertyDevice. Click OK.
- 3. Run the application again, and the application runs in the QwertyDevice emulator.



# Changing the Emulator Platform

## ■ Adding a new Emulator platform 1/2

1. Choose Tools > Java Platform Manager from the main toolbar.
2. In the Java Platform Editor dialog, click the Add Platform button.
3. In the Choose Platform Folder page of the Add Platform wizard, Use the Browse button to navigate to the parent directory of the emulator platform you want to install. For example, c:\WTK22. Click Next.



# Changing the Emulator Platform

## ■ Adding a new Emulator platform 2/2

1. In the Configure the Platform Page, the IDE detects and configures the platform and displays information about the platform. Click finish to complete the configuration.
2. Choose File > "MyHello" Properties.
3. Choose the Platform node, then choose the name of the new emulator (for example, J2ME Wireless Toolkit 2.2) from the Emulator Platform dropdown menu. Click OK.



# What Next ?

- **MIDP Online Tutorial**
  - for more detailed information about any of these topics
- **Manual**
- Simulate on Emulator and then download on mobile