

# **ACCP 17.1 – SEMESTER 3**

## **BEGINNING ASP.NET**

Session 6 - Introduction to Mobile Application

# Objectives

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- ❑ Wireless Web Development
- ❑ ASP.NET Mobile Application Development
- ❑ Mobile Web Server Controls



# Wireless Web Development

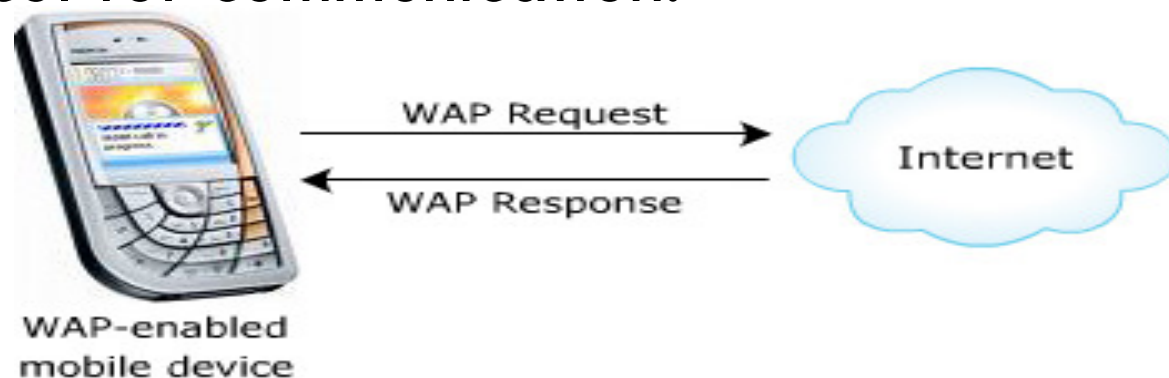
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- ❑ Wireless Web development involves creating Web applications for wireless devices that can access the internet.
- ❑ The .NET Framework along with ASP.NET provides the environment to develop such application.
- ❑ Most of the advanced cell phones are Internet-enable, which allows us to browser the Internet, send e-mails, receive news, sports, and weather updates and so on.



# Wireless Web Development - WAP

- ❑ Wireless Application Protocol (WAP) is a set of standards for developing Web applications that use the internet over different platforms.
- ❑ WAP 2.0 primarily aims at providing easy interaction of the mobile devices with desktop computer by supporting the standard Internet protocol for communication.



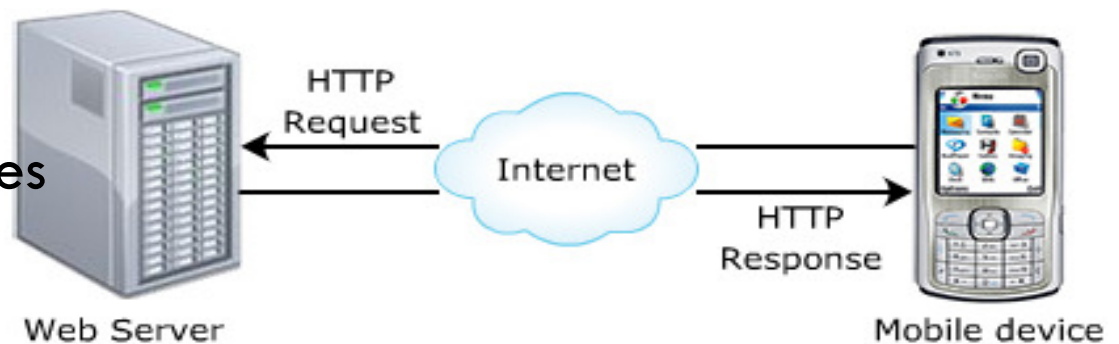
# Wireless Web Development : Challenges

- ❑ Internet usage through the mobile devices such as cell phones and PDAs is rapidly increasing.
- ❑ Development for mobile devices faces some challenges due to:
  - ❑ *Variable Screen Sizes*
  - ❑ *Lower Bandwidth*
  - ❑ *Necessity of Different Markup Languages*

# ASP.NET Mobile Application Development

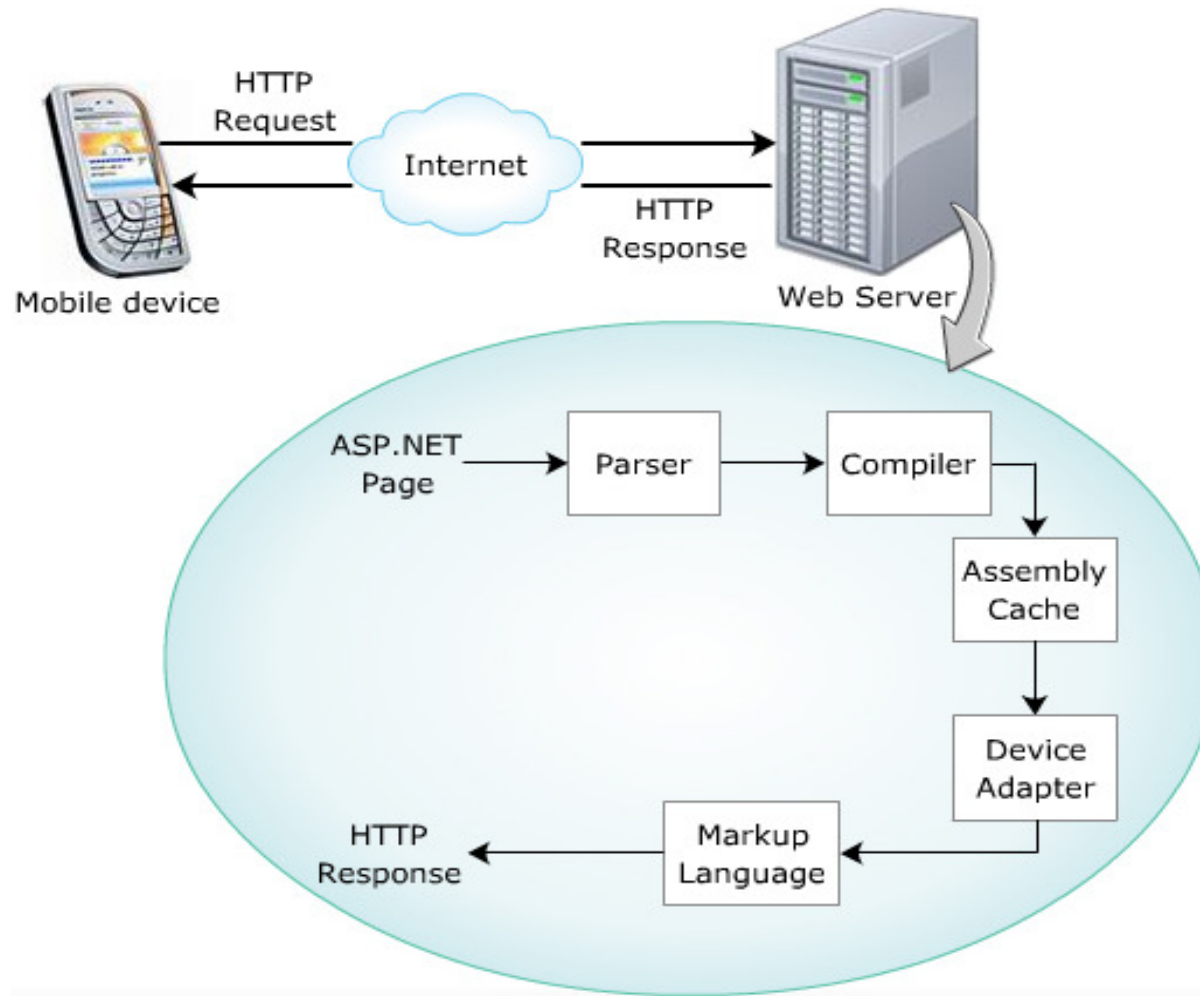
- ❑ This architecture allows creation of Web pages that can be displayed on browser of both desktop and mobile devices
- ❑ Mobile devices use the mobile application architecture to request for the Web pages from the IIS server.
- ❑ Useable components for creating Mobile Web Application:

- ❑ CLR
- ❑ XML Web Services
- ❑ ADO.NET



# ASP.NET Mobile Application Development

## *Working of Mobile Application Architecture*



# ASP.NET Mobile Application Development

## *Advantages of Mobile Application Architecture in ASP.NET 2.0*

- ❑ The device filter can be added in a mobile Web application by declaring it in the markup.
- ❑ If the mobile device is changed, the required changes can be managed by updating the individual browser file rather than making changes in the *machine.config*, *web.config*, and *config* files.
- ❑ The CLR features:
  - ❑ Memory management,
  - ❑ Security management,
  - ❑ and code verification for execution of the mobile Web applications.



# Mobile Web Server Controls

- ❑ The *System.Web.Mobile* namespace provides basic functionalities for mobile Web applications.

- ❑ Mobile Web server controls:

- ❑ *Label*
- ❑ *TextBox*
- ❑ *PhoneCall*
- ❑ *List*
- ❑ *Link*

The diagram illustrates a mobile web form with the following elements and annotations:

- Welcome to EasyBank**: A label at the top of the form.
- Enter Account Number:**: A label above a text input field.
- TextBox Control**: An annotation with an arrow pointing to the text input field.
- Click a loan type:**: A label above a list of links.
- List Control**: An annotation with an arrow pointing to the list of links.
- Home Loan**, **Personal Loan**, **Student Loan**: Three blue, underlined links listed vertically.
- Submit**: A button below the list of links.
- Link Control**: An annotation with an arrow pointing to the "About EasyBank" link.
- About EasyBank**: A blue, underlined link at the bottom of the form.

# Mobile Web Server Controls

## *Working with Mobile Web Forms*

- ❑ Once a mobile Web application is created, it can easily be tested using an emulator.
- ❑ An Emulator is a software application that allows you to get a layout of the mobile Web application on a specific mobile hardware.
- ❑ Pocket PC 2003 SE Emulator and Smartphone 2003 SE Emulator are two of the commonly used emulators in Visual Studio 2005



**Mobile Web Form**

# Mobile Web Server Controls

## *Creating Mobile Web Applications*

### □ Steps :

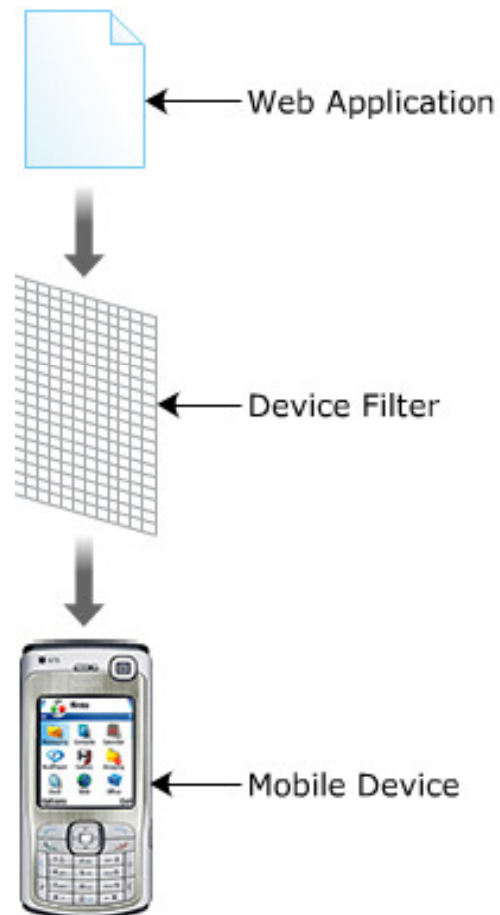
- Create an empty ASP.NET Web Site
- Add Web.config File
- Add a Mobile Web Form
- Create a Mobile Web Application
- View the Mobile Web Application



The application being tested on emulator

# Mobile Web Server Controls

## Device Filtering



```
<mobile:Form ID="frmIntro" Runat="server">  
<mobile:Label Runat="server">Welcome!</mobile:Label>  
</mobile:Form>
```

ASP.NET Web Application

```
<deviceFilters>  
  <filter name="isJPhone" argument="J-Phone"/>  
  <filter name="isGoAmerica" argument="Go.Web"/>  
  <filter name="isMyPalm" argument="MyPalm"/>  
</deviceFilters>
```

ASP.NET Device Filter



# Summary – Workshop Activities

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- ❑ Wireless Web Development
- ❑ ASP.NET Mobile Application
- ❑ Mobile Web Server Controls

