

Software Engineering

Week-6-Lesson-1 Prototyping-GUI



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List of Topics

- What is Software Prototyping?**
- Benefits of Software Prototyping**
- Types of Prototyping**
- Creating Paper Prototypes**
- Creating High-Fidelity Prototype**

Software Prototyping

- ❑ A Software prototype is a **draft version** of software program that allows you to explore your ideas and show the intention behind a feature or the overall design concept to users before investing time and money into development.
- ❑ Prototyping can be considered as a risk reduction activity

Prototyping Benefits

- ❑ Misunderstandings between software users and developers are exposed
- ❑ Missing services may be detected and confusing services may be identified
- ❑ Sometimes it helps to demonstrate the concept to prospective investors to get funding for project.
- ❑ It reduces risk of failure, as potential risks can be identified early.

Types of Prototyping

□ **Low-Fidelity Prototyping**

- **Paper prototyping**
- **Mockups**

□ **High-Fidelity Prototyping**

- **Macromedia Director or Flash, Smalltalk , Java Script, Microsoft Tools, HTML**

Low-Fidelity Prototyping

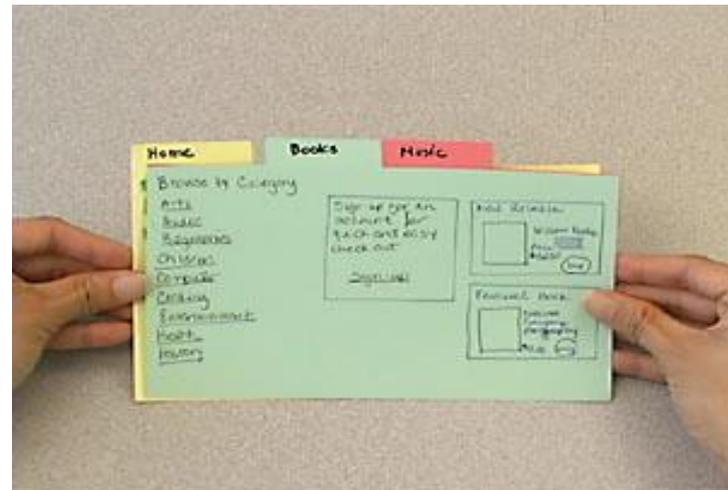
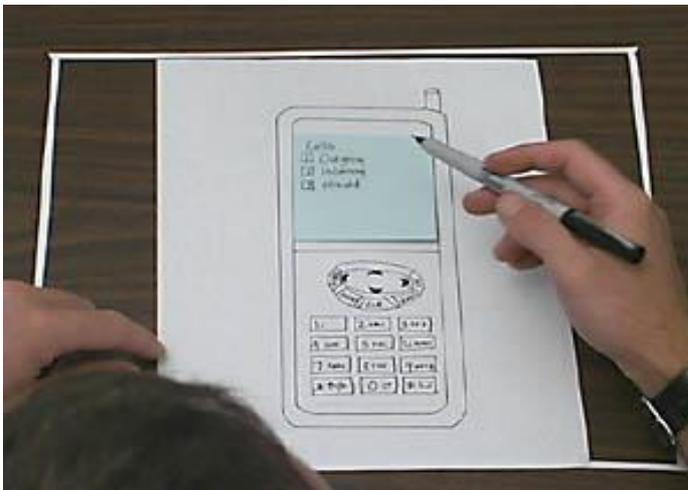
Tools for Paper Prototyping



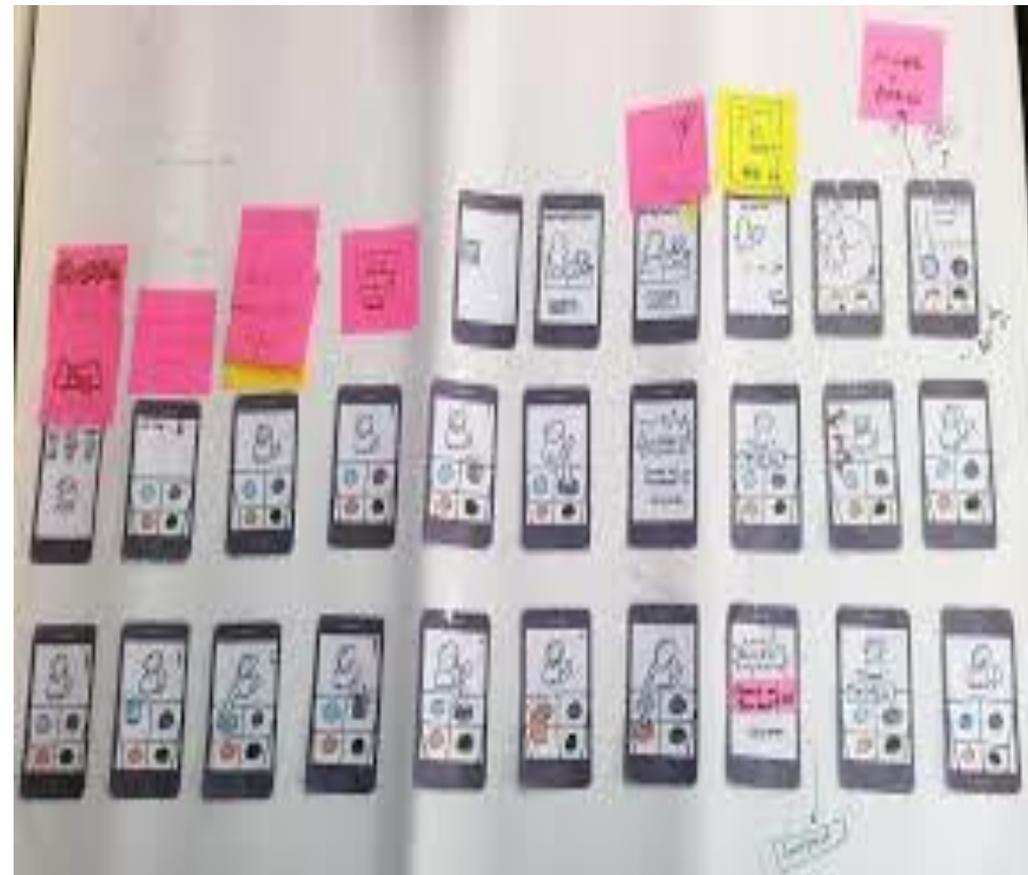
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- Color Pencil
- Rubber
- Paper
- Eraser
- Scale
- Scissor

Low-Fidelity Prototyping

- ❑ Does not look very much like the final product. Material, behavior etc.
- ❑ Material such as paper & cardboard rather than electronic screens, metal and detailed code.
- ❑ Simple, cheap & quick to produce and redesign.
- ❑ Early stage of development –prototyping for the conceptual design.



Creating Low-Fidelity Prototyping



Creating Low-Fidelity Prototyping



High-Fidelity Prototyping

- ❑ Looks very much like the final product.
- ❑ If the prototype is for software system, a software tool, such as Macromedia Director or Flash, Visual Basic or Smalltalk, might be needed.
- ❑ Software prototype tools are also often qualified development environments.
- ❑ More time-consuming to produce than low-fidelity prototyping.

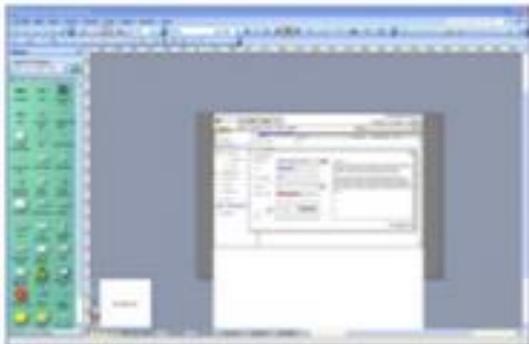


High-Fidelity Prototyping

Overview on Tools

For Example

- Microsoft Visio, PowerPoint
- MS Expression Blend
- Axure Pro
- iRise Studioj



MS Visio



MS Expression Blend

Axure Pro

Creating High-Fidelity Prototyping (using Powerpoint)

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Creating High-Fidelity Prototyping

(Using HTML, Java Script,css)

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Advantages of Low-Fidelity Prototyping

- ❑ Low-fidelity representations, such as sketches, differ from the final product in interaction design, visual appearance, and/or level of details. The method is quick & cheap which encourage iterative design idea tryouts between/during usability tests.
- ❑ Quick Low-fidelity tests allows designers and users to focus on high-level interaction design and information architecture, rather than on details or visual style.

Advantages of High-Fidelity Prototyping

- ❑ High-fidelity prototypes offer more realistic interactions than low-fidelity.
- ❑ Better at conveying the range of design possibilities.
- ❑ User-driven.

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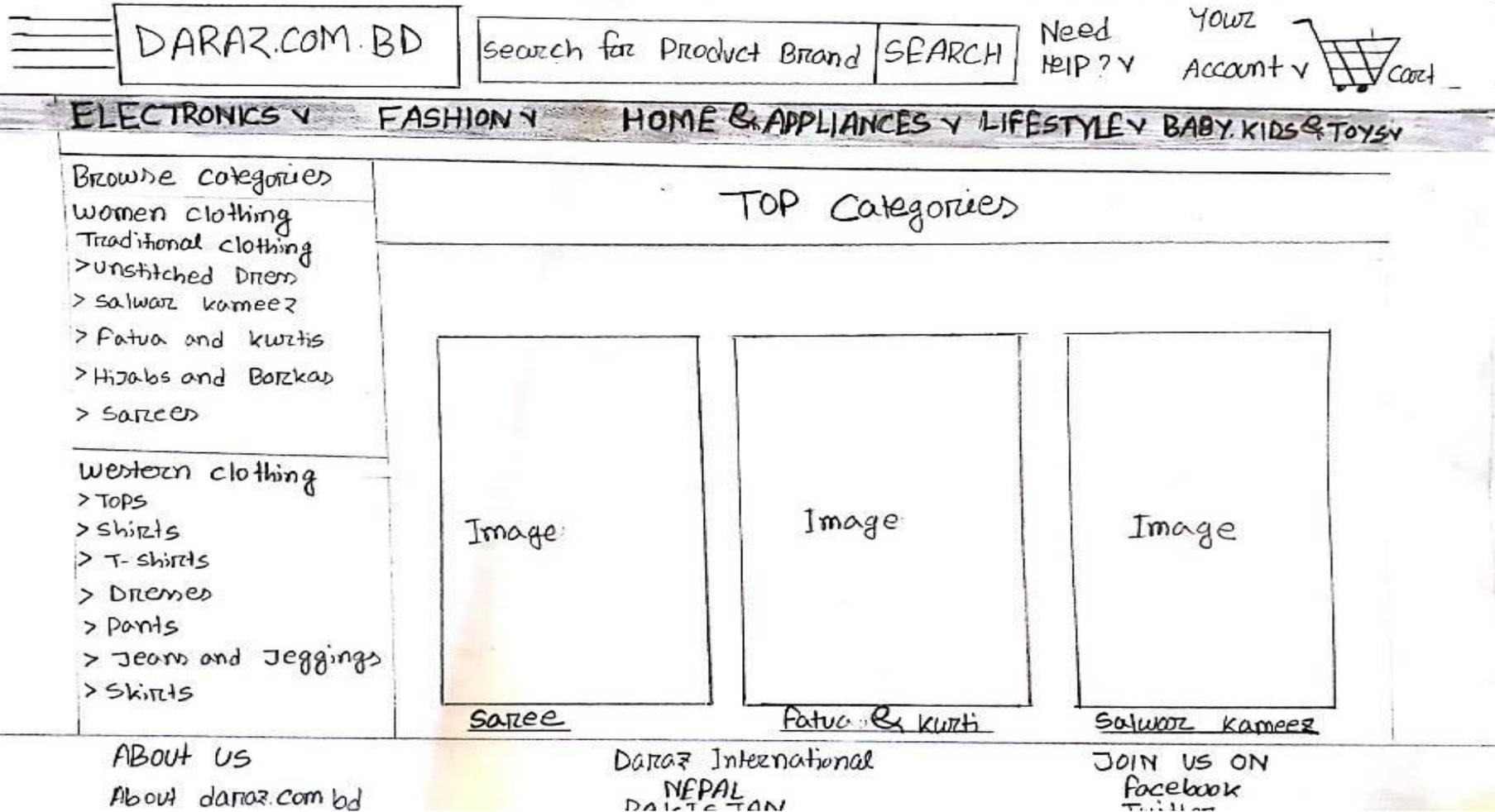
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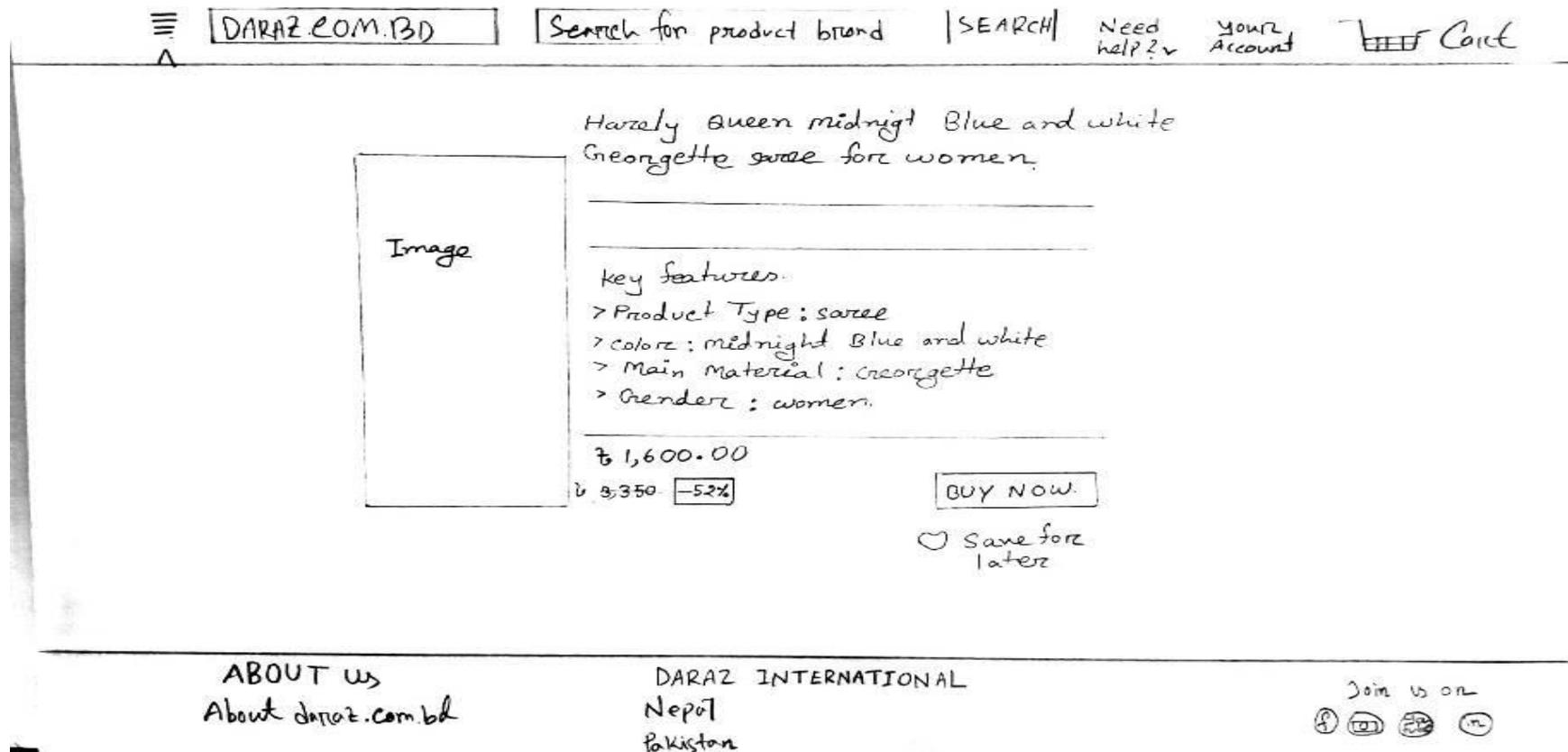
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