Developing Mobile Applications
ID2216/UMT

Checkers Game

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Outline

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Checkers Game

- **Checkers** is the name of several different board games.
- All of these games are similar.
- In every kind of checkers, the other player's pieces can be taken by being "jumped" over.
Design and Implementation

- Application is designed using:
  - J2ME
    - JTWI (Java Technology for wireless industry)
      - MIDP 2.0
      - CLDC 1.0
  - MIDP 2.0
  - CLDC 1.0

- Implementation IDE and Running Emulator
  - Eclipse 3.4.1
  - Sun Wireless toolkit 2.5.2
Technical description

• **Classes and packages**
  - **CheckersMidlet.java**
    - The main class of the application,
  - **CheckersCanvas.java**
    - The graphical part of the application
    - Uses The canvas as the container
    - Uses graphics class in order to paint the states of the game
  - **ColorType.java**
    - An abstract class which is made to increase the generalization.
  - **Communicator.java**
    - A threaded class
    - Responsible for all the communications of the game
  - **Main packages used in the application**
    - javax.microedition.lcdui
    - javax.microedition.midlet
    - javax.microedition.io
    - javax.wireless.messaging
Technical description

- **Message passing and threaded:**
  - The application uses simple asynchronized SMS message passing as its communication Schema.
  - Communication part is threaded
    - Will be run in parallel with the app
    - Sends the message
    - Waits for the other peer’s response
Technical description

- Communication Protocol
  - In order to pass the game states and decisions between peers we used a self instructed communication protocol. ex.
    - “INVITE” => Invitation Message
    - “07” or “+5” => Turn And color selection
    - etc...
How to play

Press lunch for both applications.
How to play

Press yes to communicate.
How to play

Enter the target phone number
How to play

Approve the connection by pressing the invite button.
How to play

Also approve by the player
How to play

Color selection by the system based on the phone number
How to play

Color Approve
How to play

Color approve
How to play

There are three variables:
1. The turn
2. Number of circles
3. Color
How to play

Send message for play
How to play

Game in progress
How to play

Game in progress
Conclusion

- Beta version of the application is released
- Tested on sun wireless toolkit
- Fixed some bugs and still under test
- Didn’t test on other devices yet
- Working on push method as further development
Questions