

SUPSI

Connect Four in JavaFX

Team 2

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| Studente/i | Relatore | Correlatore |
| Nicola Franceschini Guglielmo Gagliardi Dominik Panzarella | Nicola Franceschini Guglielmo Gagliardi Dominik Panzarella | |
| Corso di laurea | Modulo / Codice Progetto | Anno |
| Ingegneria Informatica | Software Engineering and Development I (M-I4040) | 2023/2024 |
| Committente | Data | |
| Giancarlo CortiTommaso Agnoli | 04/05/2024 | |

Indice

- Contesto e motivazioni
- Requisiti
- Approccio: version management
- Approccio: repository graph
- Approccio: use case diagram
- Approccio: software design
- Risultato
- Conclusioni

Contesto e motivazioni

- Progetto di semestre Ingegneria del Software I
- Sviluppare da zero una soluzione che soddisfi le richieste del committente
- Lavorare in un team composto da tre persone
- Applicare il più possibile i concetti di design del software visti durante il corso
- Utilizzo di GitLab per Version management
- Utilizzo di Maven per gestire le dipendenze
- Prodotto software distribuibile

Valutazione:

- Data di consegna e presentazione del progetto 4.06.2024
- Esposizione del progetto tramite presentazione e difesa di fronte ai committenti
- Nota unica per l'intero gruppo di lavoro
- Peso del 50% sulla valutazione totale del corso

Requisiti

Educational requirements:

- Version management
- Software design
- Internationalization
- User interaction

Functional requirements:

- Persistent settings: save and load games
- Change symbols
- Change colors
- Change language
- Shortcuts for all actions
- Integration with all the OS
- Bi-directional communication (Feedback for the user)

Approccio

Version management

- Configurazione delle issues, dei requirements e dei labels
- Collegamento tra requirements, issues e merge requests
- Utilizzo delle “merge review”:
 - Draft
 - Distinzione tra assignees e reviewers
 - Controllo dei “File changes”
 - Approve con merge sul branch
- Risoluzione di eventuali conflitti

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| #9 Persistence 2 |
| REQ-9 · created 1 month ago by Gagliardi Guglielmo · updated 1 month ago |
| #8 Standalone Application with GUI: |
| REQ-8 · created 1 month ago by Gagliardi Guglielmo · updated 1 month ago |
| #7 About part |
| REQ-7 · created 1 month ago by Gagliardi Guglielmo · updated 1 month ago |
| #6 I18n, localization |
| REQ-6 · created 1 month ago by Gagliardi Guglielmo · updated 1 month ago |
| #5 Customization |
| REQ-5 · created 1 month ago by Gagliardi Guglielmo · updated 2 weeks ago |
| #4 Persistence |
| REQ-4 · created 1 month ago by Gagliardi Guglielmo · updated 2 weeks ago |
| #3 Feedback, bi-directional communication |
| REQ-3 · created 1 month ago by Gagliardi Guglielmo · updated 2 weeks ago |
| #2 Interactive Gameplay |
| REQ-2 · created 1 month ago by Gagliardi Guglielmo · updated 2 weeks ago |
| #1 Grid interface |
| REQ-1 · created 1 month ago by Gagliardi Guglielmo · updated 2 weeks ago |

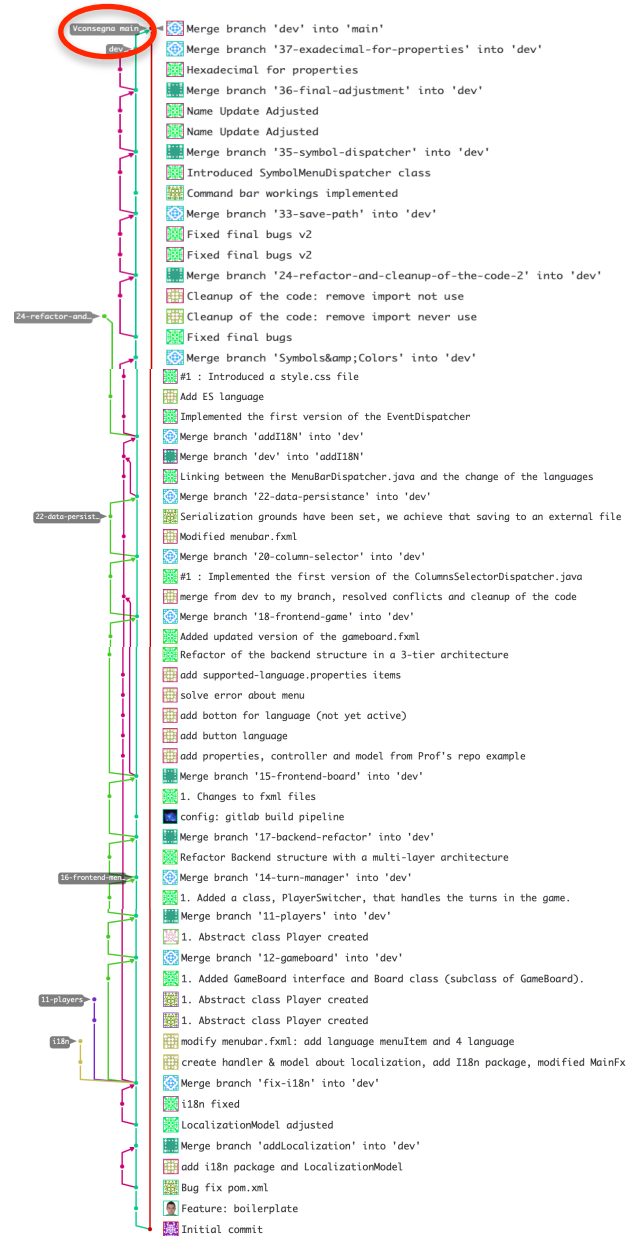
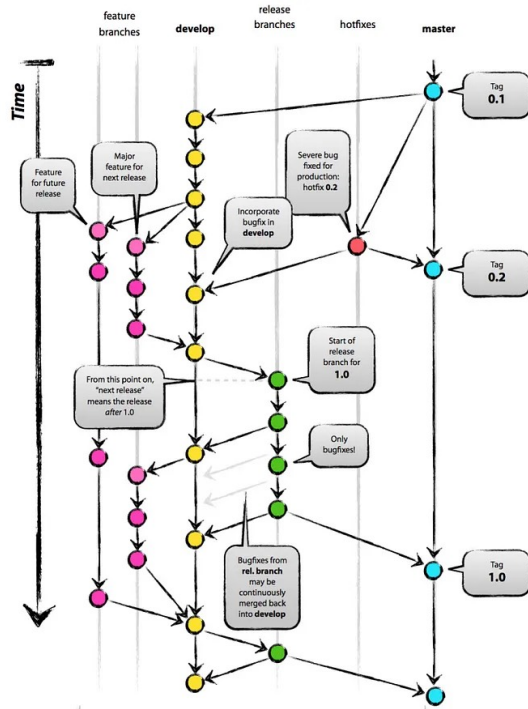
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|--|
| devops create |
| DTI-ISIN / labingsw / labingsw01 / 20232024 / Connect Four / Group02 |
| priority High |
| DTI-ISIN / labingsw / labingsw01 / 20232024 / Connect Four / Group02 |
| Priority Low |
| DTI-ISIN / labingsw / labingsw01 / 20232024 / Connect Four / Group02 |
| Priority medium |
| DTI-ISIN / labingsw / labingsw01 / 20232024 / Connect Four / Group02 |
| Type Cleanup |
| DTI-ISIN / labingsw / labingsw01 / 20232024 / Connect Four / Group02 |
| Type New Feature |
| DTI-ISIN / labingsw / labingsw01 / 20232024 / Connect Four / Group02 |
| Type Optimization |
| DTI-ISIN / labingsw / labingsw01 / 20232024 / Connect Four / Group02 |

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| menu-bar |
| #30 · created 2 weeks ago by Panzarella Dominik |
| Priority medium Type New Feature |
| info-bar |
| #29 · created 2 weeks ago by Panzarella Dominik |
| priority High Type New Feature |
| Update language I18N |
| #28 · created 2 weeks ago by Gagliardi Guglielmo |
| priority High Type Optimization |
| Create name of the player |
| #27 · created 2 weeks ago by Gagliardi Guglielmo |
| Priority Low Type New Feature |
| Implements colors for both player |
| #26 · created 2 weeks ago by Gagliardi Guglielmo |
| devops create Priority medium Type New Feature |
| event-dispatcher |
| #25 · created 2 weeks ago by Panzarella Dominik May 18, 2024 |
| devops create priority High Type Optimization |
| Refactor and cleanup of the code |
| #24 · created 2 weeks ago by Gagliardi Guglielmo |
| Priority Low Type cleanup Type Optimization |

| |
|---|
| Refactor and cleanup of the code |
| #24 · created 5 days ago by Gagliardi Guglielmo 1" d. |
| Priority Low Type cleanup Type Optimization |
| Symbols&colors |
| #21 · created 6 days ago by Gagliardi Guglielmo 1" d. |
| Priority medium Type New Feature |
| Command bar workings implemented |
| #22 · created 6 days ago by Franceschini Nicola 1" d. |
| Priority medium Type New Feature |
| info-bar |
| #20 · created 1 week ago by Panzarella Dominik 1" d. |
| Type New Feature priority High |
| Updated languages |
| #18 · created 2 weeks ago by Gagliardi Guglielmo ... |
| Type Optimization priority High |
| Resolve "Update language I18N" |
| #17 · created 2 weeks ago by Gagliardi Guglielmo ... |
| Type Optimization priority High |
| Refactor and cleanup of the code |
| #24 · created 2 weeks ago by Gagliardi Guglielmo |
| Priority Low Type cleanup Type Optimization |

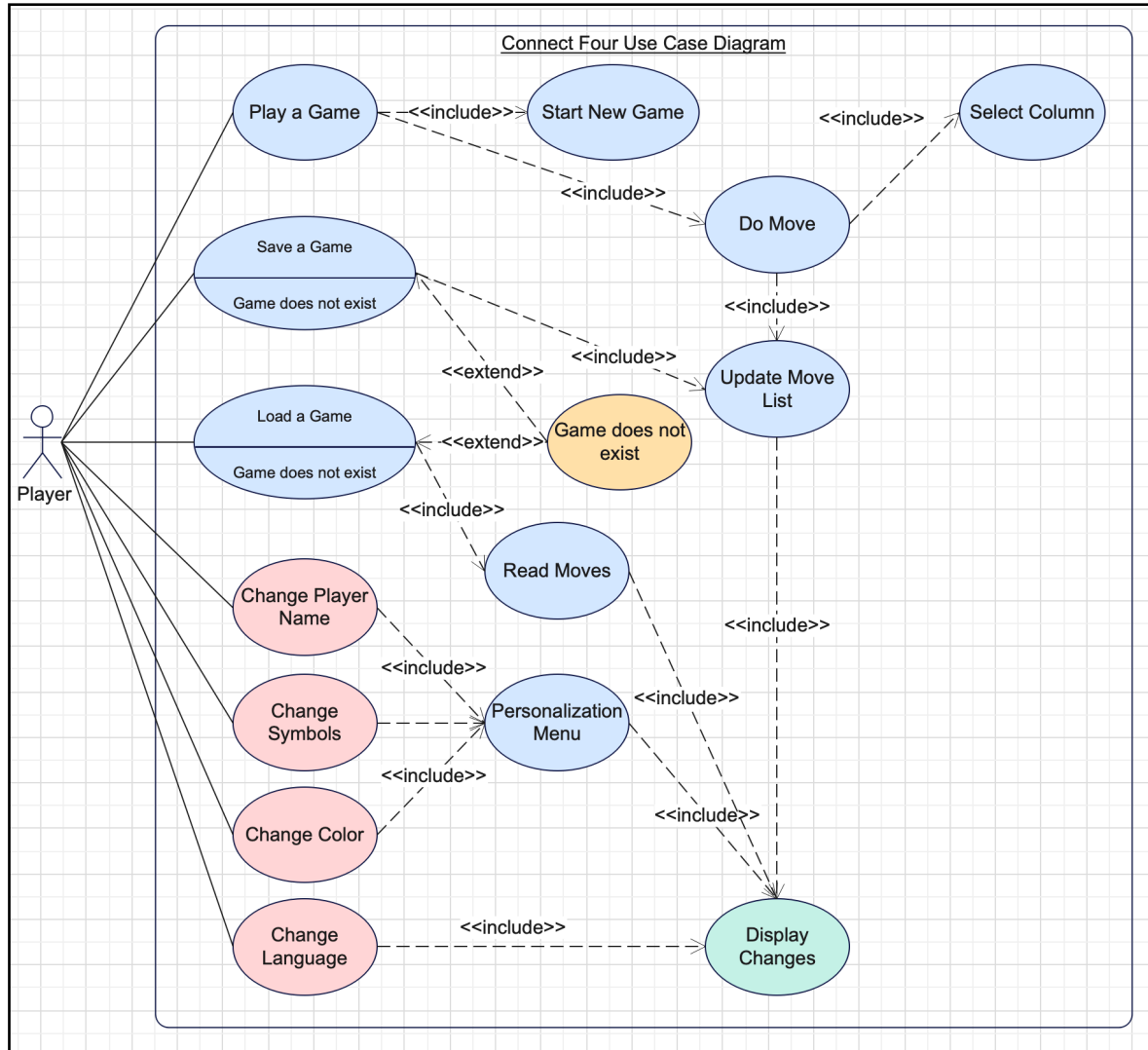
Approach (cont.)

Repository graph



Approccio (cont.)

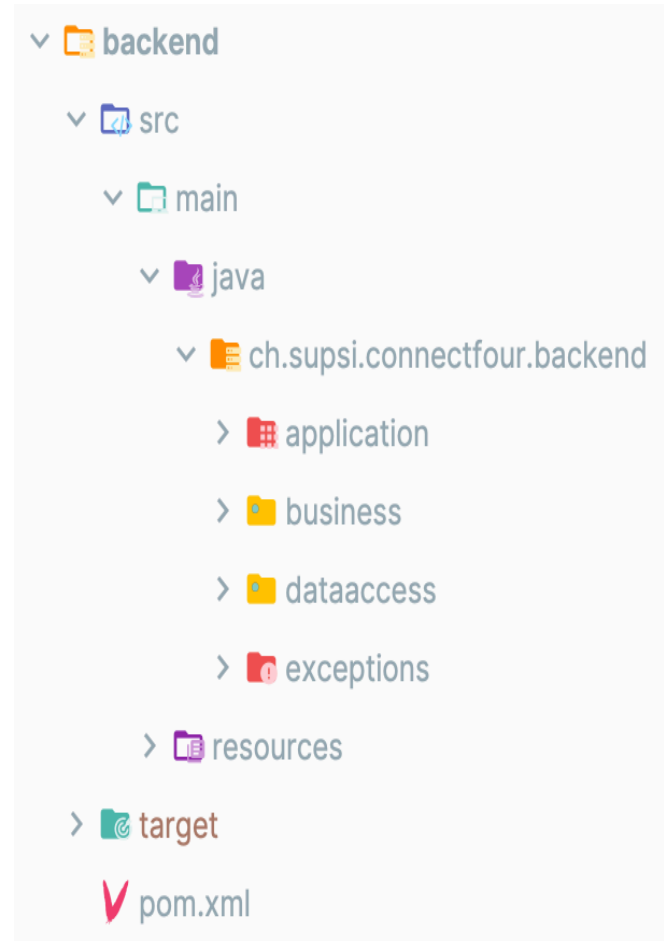
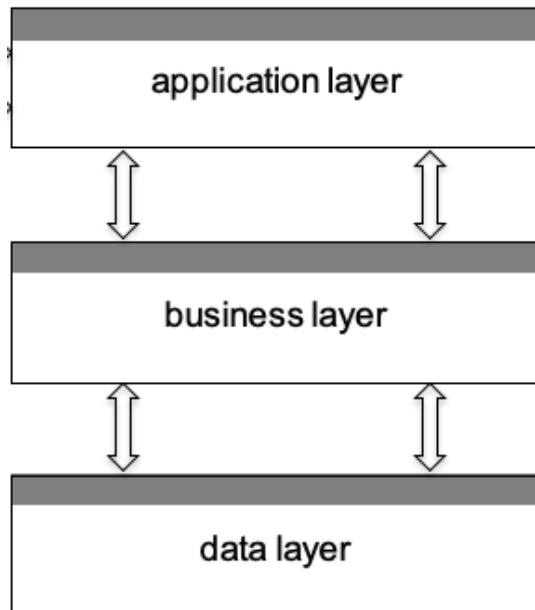
Use case diagram



Approach (cont.)

Software Design (Backend)

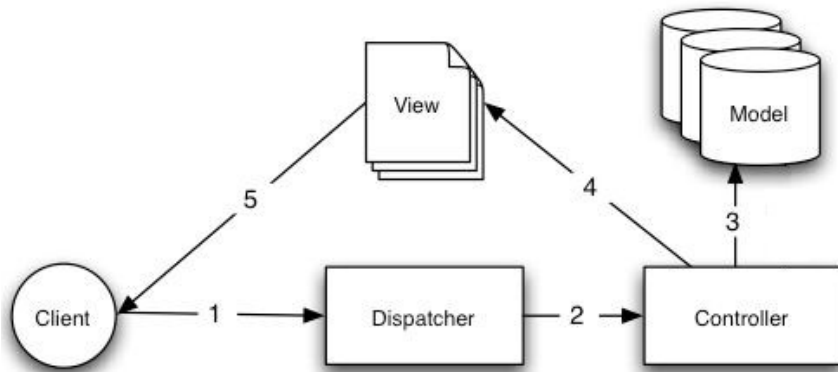
Multi Layer Architecture



Approach (cont.)

Software Design (Frontend)

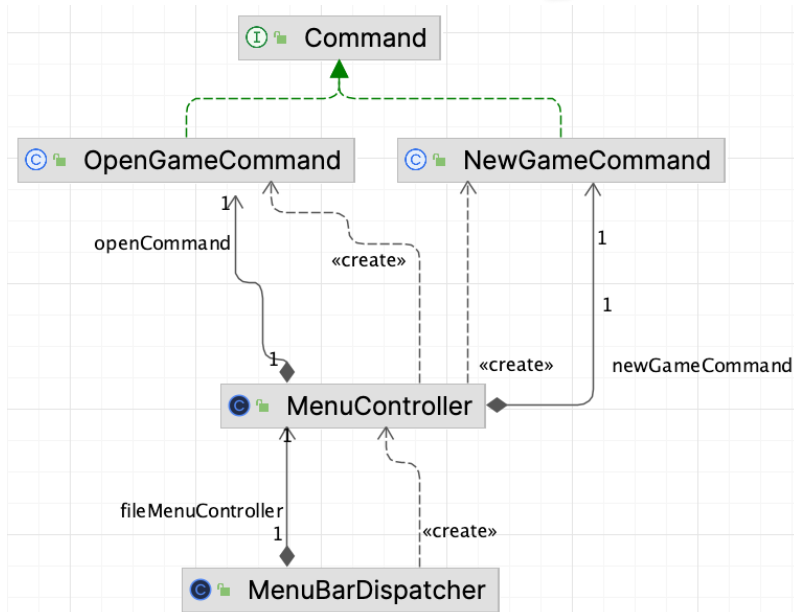
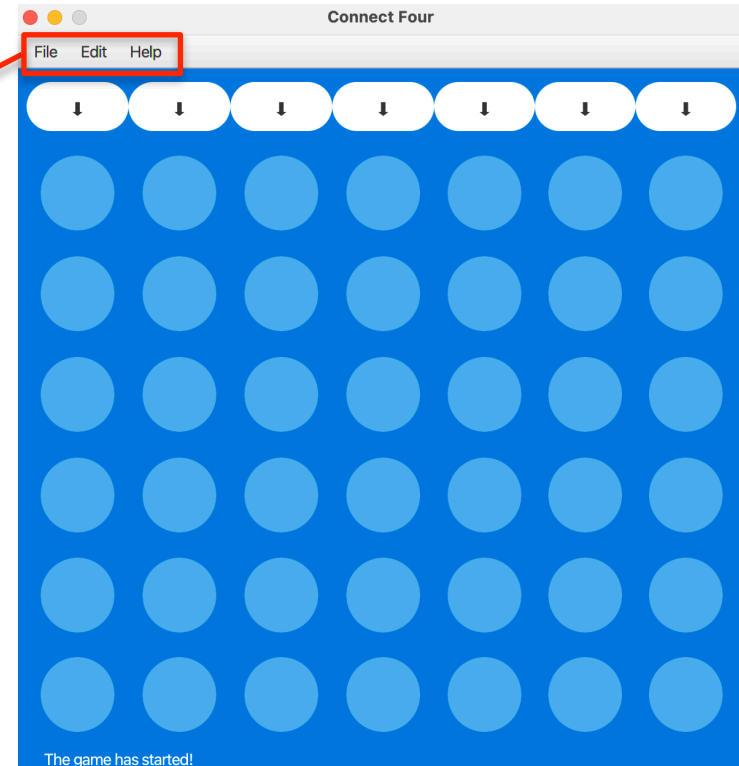
MVC Pattern



```
▼ frontend
  ▼ src
    ▼ main
      ▼ java
        ▼ ch.supsi.connectfour.frontend
          > command
          > controller
          > dispatcher
          > model
          > view
          > Main
          > MainFx
          > resources
        > target
        > pom.xml
```

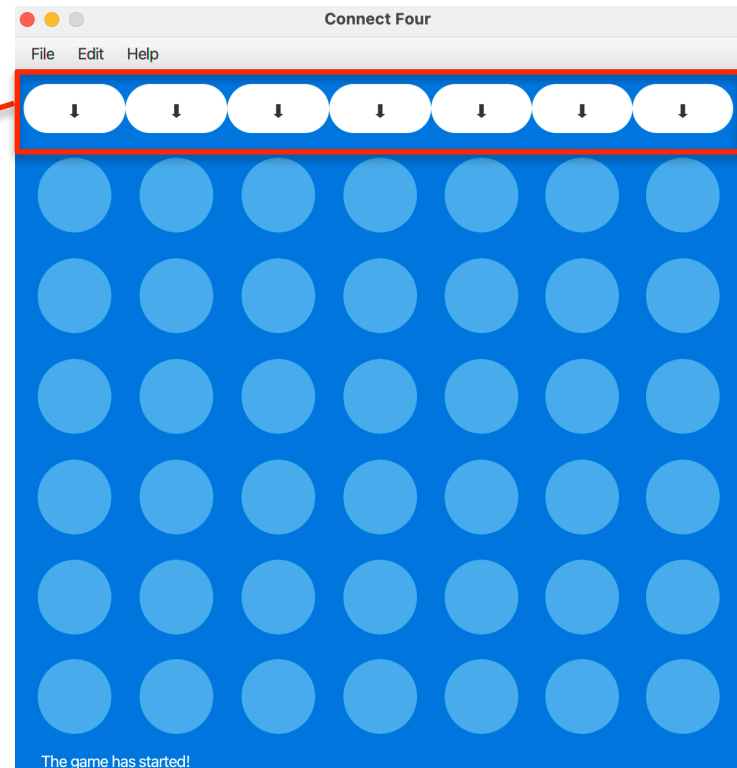
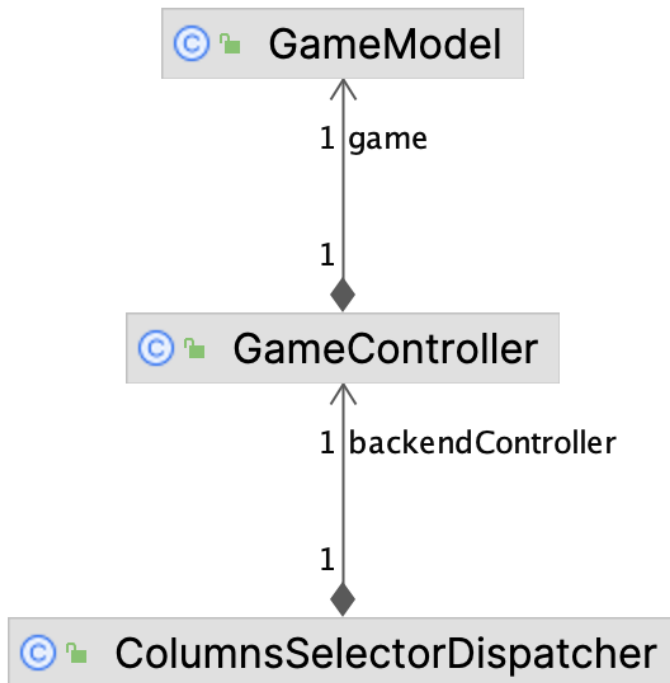
Approach (cont.)

Software Design



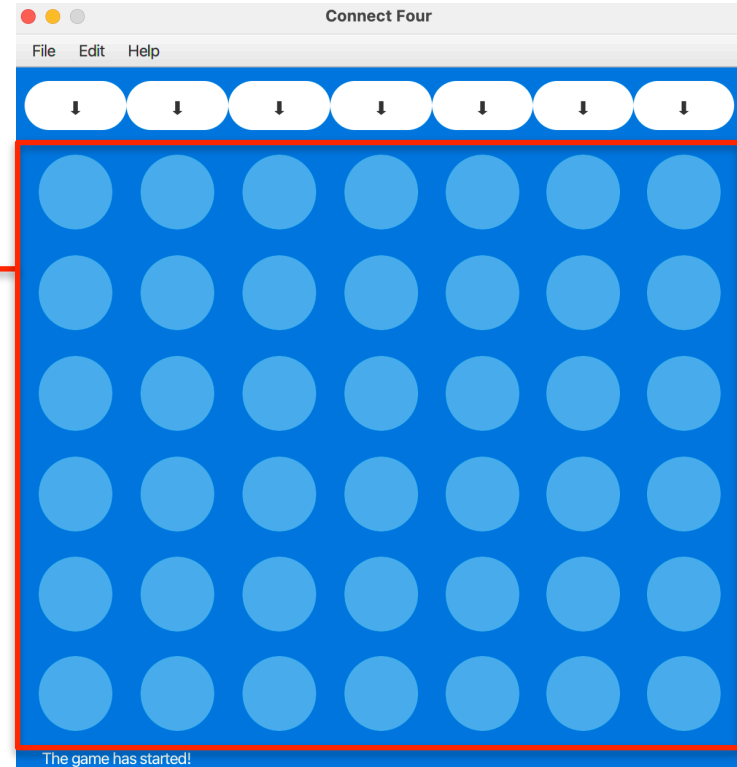
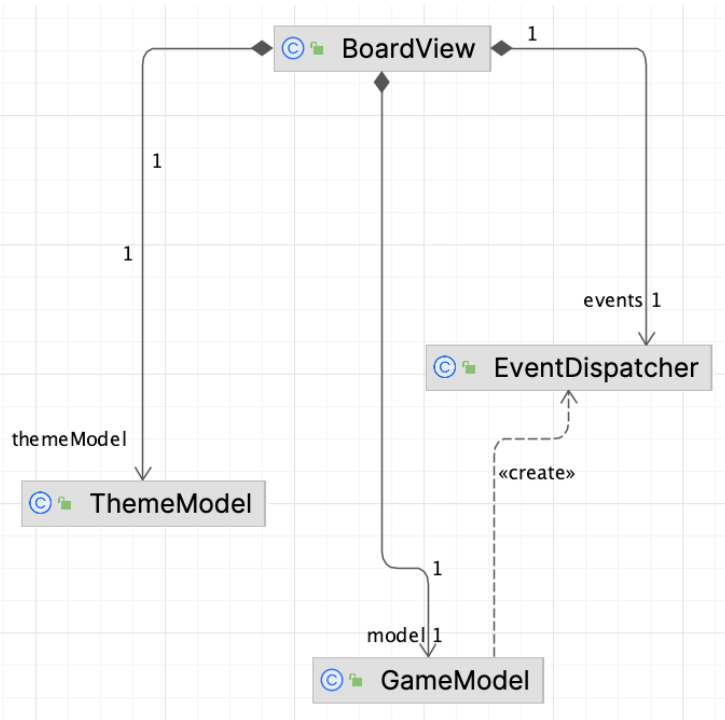
Approach (cont.)

Software Design



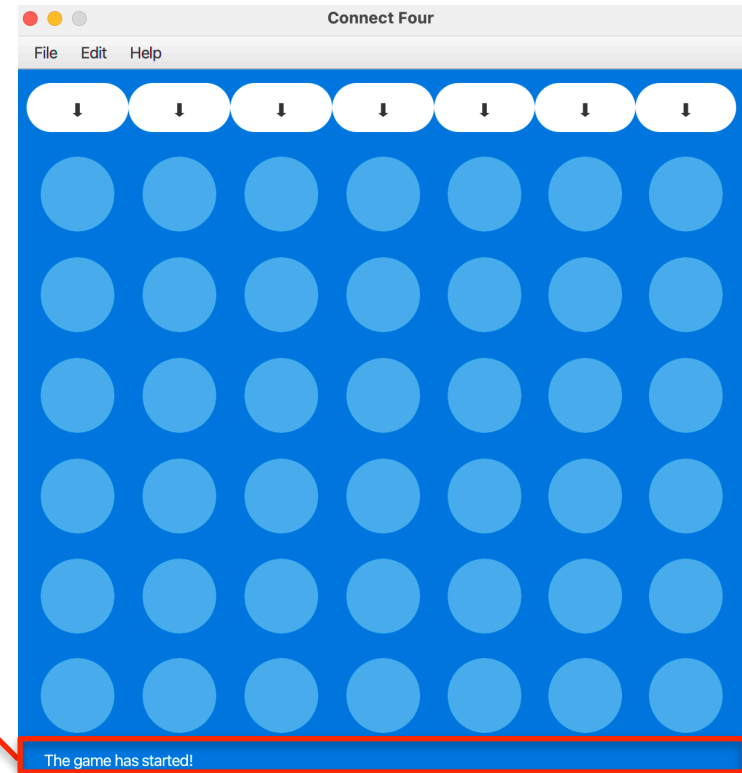
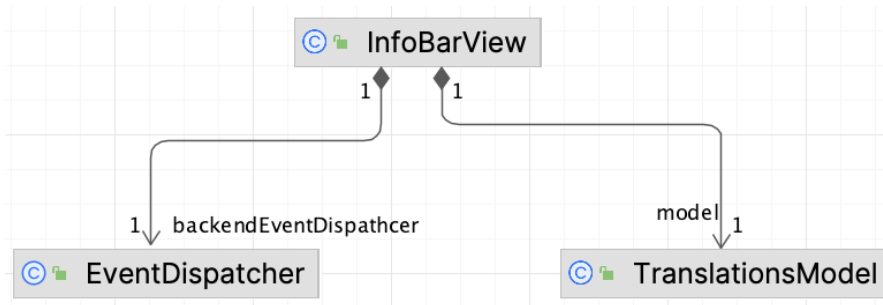
Approach (cont.)

Software Design

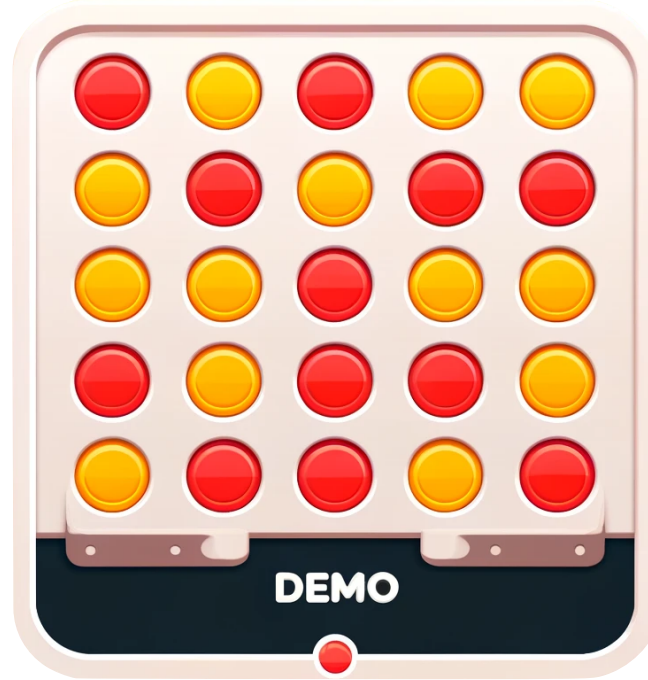


Approach (cont.)

Software Design



Risultato



Conclusioni

Il progetto assegnato è stato molto formativo per quelli che sono gli aspetti del corso di ingegneria del software, permettendo di mettere in pratica i concetti perlopiù teorici visti in classe. Il lavoro in team è stato gestito in maniera ottimale e siamo stati capaci di contribuire allo scopo comune senza nessun intoppo. Seppur migliorabile siamo soddisfatti del risultato ottenuto.

Grazie per l'attenzione!