**工作分解结构wbs**

**Date 2021/11/15**

**Project Name**: **AlphaXiu Gobang Webgame Project**

**1. Start up**

**1.1 Determine the project**

**1.2 Identify key stakeholders**

**1.3 Confirm project experience**

**1.4 Create a project charter**

**2. Plan**

**2.1 Create Scope Statement**

**2.2 Create a project management plan**

**2.3 Create a schedule**

**2.4 Create WBS and WBS dictionaries**

**3. Implement**

**3.1 Analysis**

(1) User research

(2) Demand analysis:

① Define requirements and determine use cases;

② Requirement modeling, writing use case documents, and determining non-functional requirements.

**3.2 Design**

(1) Prototype design:

① Game mode selection interface;

② Game board interface;

③ The game end interface.

(2) System function design:

① The design of the two-player game function;

② Human-machine game function design.

**3.3 Coding**

(1) The first iteration coding:

① Realize the basic UI interface drawing of the front end of the chessboard;

② Realize the drawing of chess pieces.

(2) The second iteration coding:

① Realize the warning effect under the situation of Silianzi;

② Realize the prompt information display of the success and failure of the game;

③ Realize the function of two-player game and man-machine game;

(3) The third iteration coding:

① Optimize the visual effect;

② Test system performance and complete delivery.

**3.4 The Ninth Week Task**

(1) Code writing

① Implement a brute force algorithm based on situation search;

② Optimize the code structure.

(2) Document writing

① Complete the preparation of the project management plan;

② Completion of the project charter;

③ Write the "Init the game" use case to complete the game initialization function.

**3.5 Tenth week tasks**

(1) Code writing

① Realize a function to evaluate the situation;

② Perform some pruning on the search algorithm.

(2) Document writing

① Prepare a risk management plan;

② Update the project management plan;

③ Compile a communication management plan;

④ Compile a cost management plan;

⑤ Compile demand management plan, scope management plan and work breakdown structure;

⑥ Compile requirements specifications.

**3.6 Missions for Week 11**

(1) Code writing

① The search algorithm is rewritten based on minimax and α-β pruning;

② Optimized the calculation method of position evaluation.

(2) Document writing

① Update the quality management plan;

② Update the risk management plan;

③ Update WBS dictionary and WBS;

④ Update the Gantt chart.

**3.7 The Twelfth Week Task**

(1) Code writing

① Optimized the constant.

② Use the hash table to store the situation and speed up the search speed.

(2) Document writing

① Update the "AI Judgement on Game" use case to complete the game AI decision-making function;

② Update the "Give a Weight for a Situation" use case;

③ Update WBS dictionary and WBS;

④ Compile detailed design documents;

⑤ Iterative Gantt chart;

⑥ Iterative schedule management plan;

⑦ Iterative human resource management plan;

⑧ Iterative cost management plan.

**4. Finishing**

Thirteenth week tasks:

① Organize WBS and WBS dictionaries;

② Improve project management documents and project achievement documents;

③ Improve the Gantt chart and schedule management plan;

④ Complete system source code packaging and delivery;