# EECS 1022\_Project\_Phase 2

Team name: Code for Good

Members of the team:

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Project name: Guess, pick, win!

Short description:

Everyone has considered themselves a lucky person at least once in their lifetime, but how long does their luck last? In our application, users can challenge their luck and see how far it will take them.

In this project, the computer picks a random number in a specified set of integers from 1 to any number that the user likes. The user has the opportunity to guess the selected number. The count of the highest correct answers in a row is the high score, and the goal is breaking your record. The app will congratulate the user once they break the high score. If the user guesses incorrectly, the score will restart, and they can start again.

Requirements:

* A number is received from the user and is compared to the one generated by the app.
* Whether the guess was correct or not is shown to the user.
* The user can get a hint in the middle of the game.
* If the answer is incorrect the score will become zero.
* After each guess, show the user’s score and announce if their answer is correct or incorrect.
* Show an announcement once the user breaks the high score.
* Add the user’s score to a high score list.
* The scoreboard is shown on the main page of the app.
* The progress is saved even after exiting the application.
* Users can change the difficulty of the game number from the main menu or mid-game.
* The user can decide between 3 difficulty levels that are responsible for changing the range of numbers.

Diagram

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Thechnology that benn used:

Android Studio IDE, Java Programming Language via IntelliJ IDEA, Java Unit Testing.

Implementation design:

**public class MainActivity extends AppCompatActivity**

public void openGameScreen()

Intent intent = new Intent(this, gameScreen.class);

startActivity(intent);

protected void onCreate(Bundle savedInstanceState)

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

Button easyButton = (Button) findViewById(R.id.easylvl);

Button mediumButton = (Button) findViewById(R.id.mediumlvl);

Button hardButton = (Button) findViewById(R.id.hardlvl);

easyButton.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openGameScreen();

);

mediumButton.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openGameScreen();

);

hardButton.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openGameScreen();

);

**public class gameScreen extends AppCompatActivity**

public void openMenuPopup()

Intent a = new Intent(this, MenuPopup.class);

startActivity(a);

public void openHintPopup()

Intent b = new Intent(this, HintPopup.class);

startActivity(b);

public void openAnnouncementPopup()

Intent c = new Intent(this, AnnouncementPopup.class);

startActivity(c);

protected void onCreate(Bundle savedInstanceState)

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_game\_screen);

Button menuBtn = (Button) findViewById(R.id.mainMenubtn);

Button hintBtn = (Button) findViewById(R.id.hintbtn);

Button guessBtn = (Button) findViewById(R.id.guessbtn);

menuBtn.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openMenuPopup();

);

hintBtn.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openHintPopup();

);

guessBtn.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openAnnouncementPopup();

);

**public class MenuPopup extends AppCompatActivity**

public void openMainMenu()

Intent a = new Intent(this, MainActivity.class);

startActivity(a);

public void openGameScreen()

Intent intent = new Intent(this, gameScreen.class);

startActivity(intent);

protected void onCreate(Bundle savedInstanceState)

super.onCreate(savedInstanceState);

setContentView(R.layout.menu\_popup);

Button xBtn = (Button) findViewById(R.id.cancelbtn);

Button mainMenuBtn = (Button) findViewById(R.id.mainMenubtn);

Button easyButton = (Button) findViewById(R.id.easylvl);

Button mediumButton = (Button) findViewById(R.id.mediumlvl);

Button hardButton = (Button) findViewById(R.id.hardlvl);

xBtn.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

finish();

);

mainMenuBtn.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openMainMenu();

);

easyButton.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openGameScreen();

);

mediumButton.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openGameScreen();

);

hardButton.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

openGameScreen();

);

**public class HintPopup extends AppCompatActivity**

protected void onCreate(@Nullable Bundle savedInstanceState)

super.onCreate(savedInstanceState);

setContentView(R.layout.hint\_popup);

Button okBtn = (Button) findViewById(R.id.okBtn);

okBtn.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

finish();

);

**public class AnnouncementPopup extends AppCompatActivity**

protected void onCreate(@Nullable Bundle savedInstanceState)

super.onCreate(savedInstanceState);

setContentView(R.layout.announcement\_popup);

Button okBtn = (Button) findViewById(R.id.okBtn);

okBtn.setOnClickListener(new View.OnClickListener()

public void onClick(View view)

finish();

);

**public class gameModel**

private String name;

private int score, difficulty, lifeLeft, max, number;

private String[] leaderboardNames;

private int[] leaderboardScores, pastGuesses;

public gameModel(int difficulty,String name,int max)

this.difficulty=difficulty;

this.name=name;

this.max=max;

this.score=0;

if (difficulty==1)

this.lifeLeft=3;

else if (difficulty==2)

this.lifeLeft=2;

else if (difficulty==3)

this.lifeLeft=1;

else

throw new IllegalArgumentException();

public void setDifficulty(int newDifficulty)

if (newDifficulty>=1&&newDifficulty<=3)

this.lifeLeft+=this.difficulty-newDifficulty;

this.difficulty=newDifficulty;

else

throw new IllegalArgumentException();

public void setMax(int newMax)

this.max=newMax;

public void setName(String name)

this.name=name;

public String getName()

return this.name;

public int getScore()

return this.score;

public int getDifficulty()

return this.difficulty;

public int getLifeLeft()

return this.lifeLeft;

public int getMax()

return this.max;