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Introduction

In the recruitment process, the human resources department applies different interview techniques. The interview phase consists of several steps and varies according to the profession. Nowadays, the classical method is widely used. In the classical method, multiple answer tests are applied on the candidate. The test questions are determined according to the traits to be measured. These tests are performed manually. After the assessments, the results are evaluated according to some scales.

In this method, applicant is aware of the fact that he is in the interview. The applicant may mislead the assessments. He/she could hesitate to give real answers and can try to choose right answers instead of his real answers.

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Objective

In the project, the problems experienced during the recruitment process of the human resources have been identified and a game have implemented to improve them. The HR Game has developed to focus on experience based traits that can be measurable with the game. The advantage of the assessment with the game is to be able to get results without revealing the real purpose and the subject. Candidate cannot mislead the test easily.

There are many approaches partially similar to project in literature. But none of them combine all methods in HR Game.

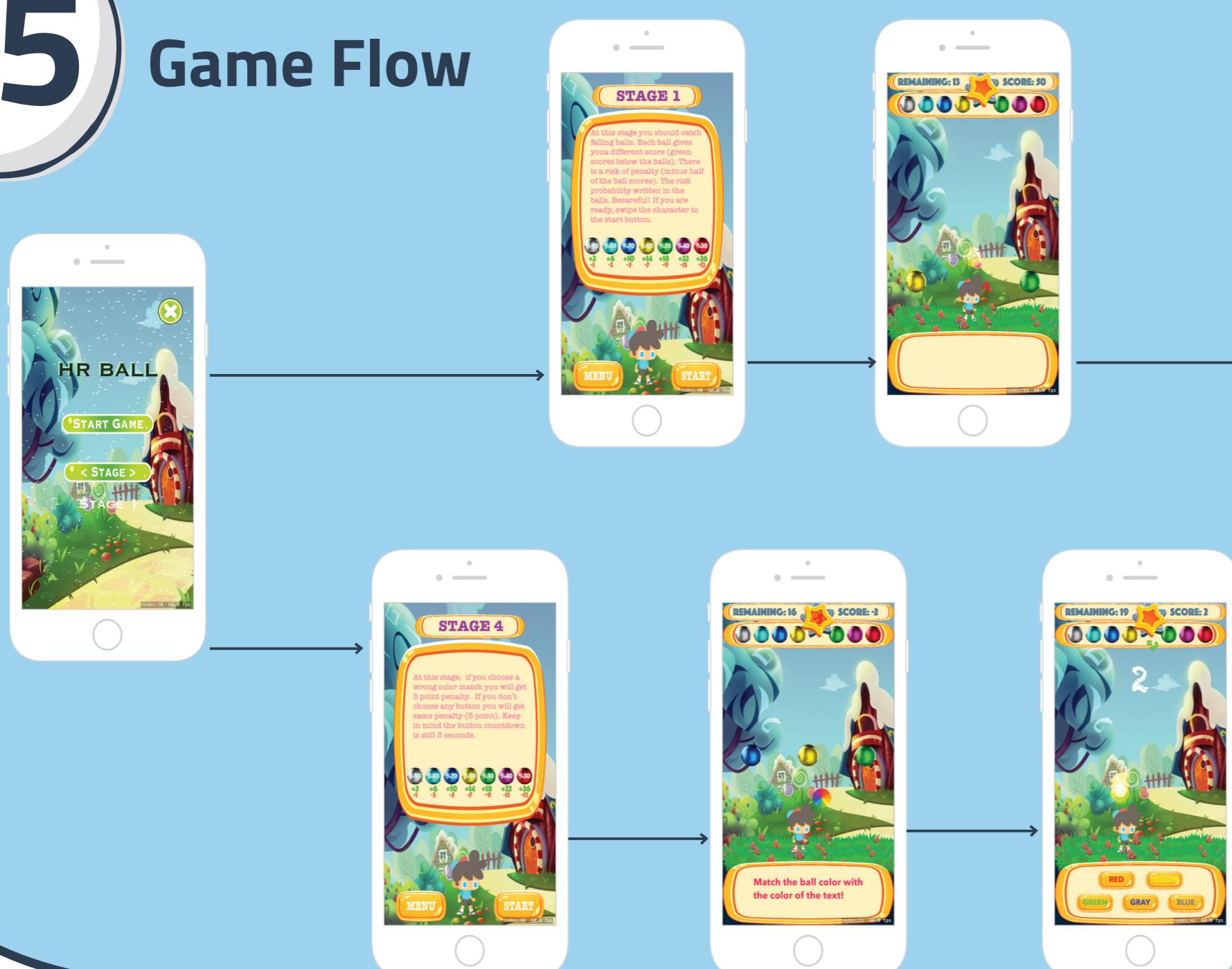
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Traits

Risk taking behavior, Selective attention, Speed of process, Flexibility, Reward penalty sensitivity, Behavior under time pressure

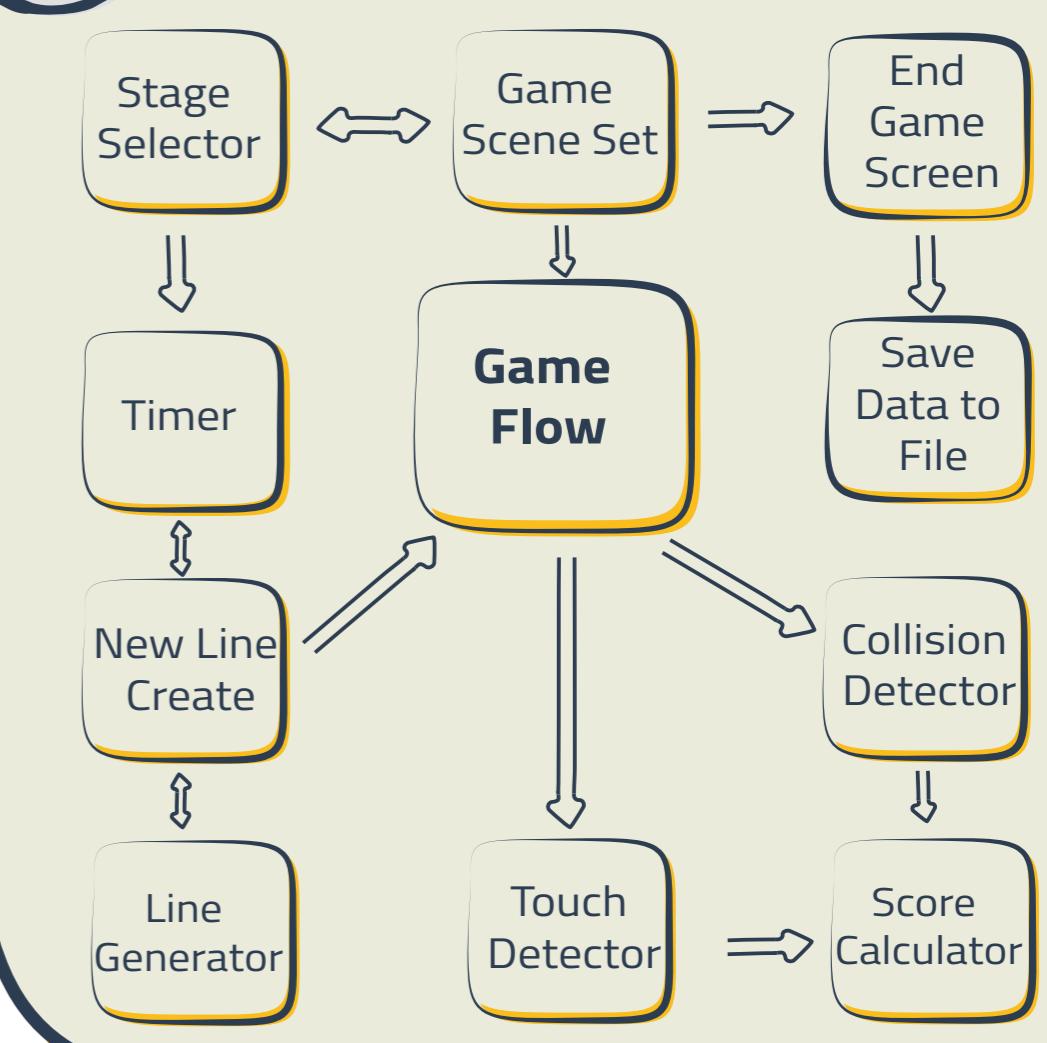
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Game Flow



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System Model



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Stages

Stage 1: At this stage you should catch falling balls. Each ball gives you a different score (green scores below the balls). There is a risk of penalty (minus half of the ball scores). The risk probability written in the balls. Be careful! If you are ready, swipe the character to the start button.

Stage 2: At this stage, there is an additional color matching question. When you catch a ball, colored buttons will appear at the bottom. You should match the ball color with the color name that will appears at the bottom. Keep in mind the button countdown is 3 seconds.

Stage 3: At this stage, there are two different color matching questions. According the question you should match the ball color with the name of the color or color of the texts. Keep in mind the button countdown is still 3 seconds.

Stage 4: At this stage, if you choose a wrong color match you will get 5 point penalty. If you don't choose any button you will get same penalty (5 point). Keep in mind the button countdown is still 3 seconds.

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Experiment Design

Risk Metrics	Risk Risk After Penalty Risk After Reward
Color Matching Metrics	Selective Attention Flexibility Speed of Process
Stage Metrics	Behavior Under Time Pressure Reward Penalty Sensitivity

The HR Game Project contains many experiments in development cycle. Because user interaction is significant. The results of the project are not precise due to the abstract human behavior. To classify and compare human behaviors, 7 metrics have been created.

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Future Works

- Web service integration to result monitoring
- Data visualization using better tools
- Correlation between well known methods in psychology for public use
- UI/UX integration for user experience
- Dynamic, Adaptive test method (considering previous answers, dynamically next question selection) (AI)

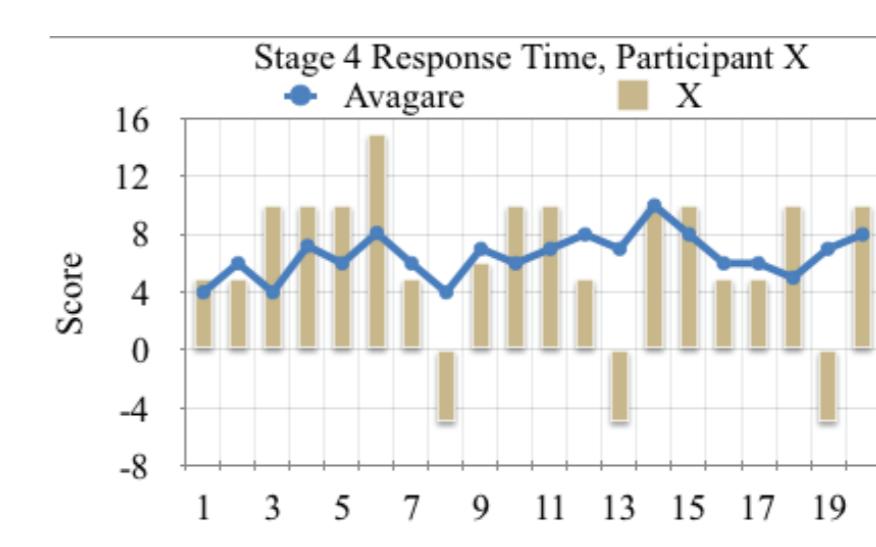
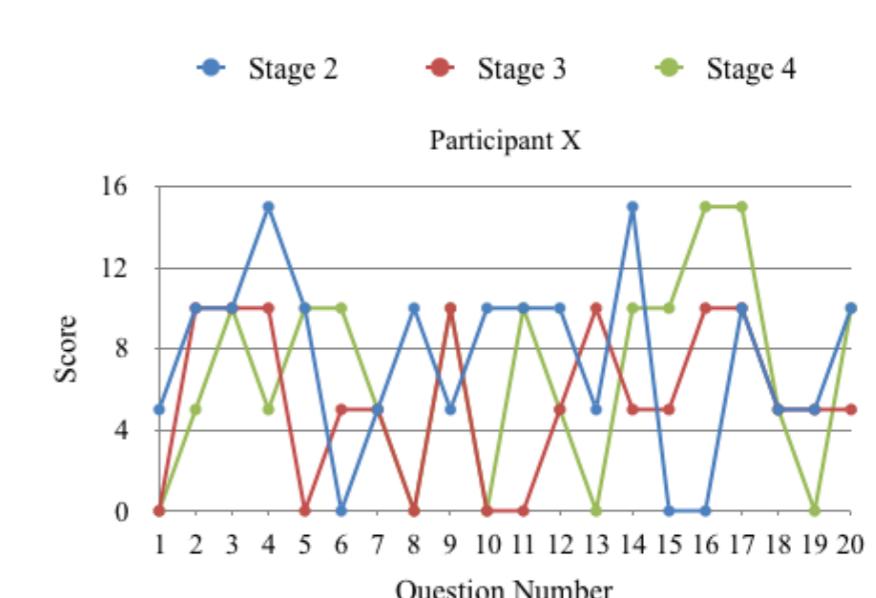
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Experiment Result

$$\begin{aligned}
 risk &= \frac{\sum riskPercentage}{\sum capturedBall} \\
 riskAfterPenalty &= \frac{\sum riskPercentageAfterPenalty}{\sum capturedBallAfterPenalty} \\
 riskAfterReward &= \frac{\sum riskPercentageAfterReward}{\sum capturedBallAfterReward} \\
 selectiveAttention &= \frac{\sum trueAnswerinColorMatching * 10}{\sum colorMatchingquestions} \\
 flexibility &= \frac{\sum trueAnswerinStage2ColorMatchingQuestions}{\sum trueAnswerinStage3ColorMatchingQuestions} \\
 speedofProcess &= \frac{\sum trueAnswersinColorMatching}{(\sum ColorMatchingQuestions) * ElapsedTime} * 100 \\
 behaviorUnderTimePressure &= \frac{\sum pointsinStage1}{\sum pointsinStage2}
 \end{aligned}$$

Metrics	Average Value	Applicant Z
Risk	%44.1	%53.2
Risk After Penalty	%37	%43
Risk After Reward	%47.4	%51.8
Selective Attention	7.3	6.4
Flexibility	1.15	1.13
Speed of Process	1.71	1.65
Behavior Under Time Pressure	0.75	0.7
Reward Penalty Sensitivity	1.24	1.32

Avarege and applicant z comparison



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