

IB CS IA Outline

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1 Criterion A

"An appropriate scenario for investigation for an identified client, providing evidence of consultation, is described. The rationale for choosing the proposed product is justified and includes a range of appropriate criteria for evaluating the success of the product."

Client - My parents

Proof of Consult - Perhaps a picture at a restaurant, recorded conversation?

Program - 'Project Oddsmaker' - simulation of probability for many things, such as lotteries, card games, etc.

Justification - to stop people from wasting their money on such silly things as gambling, or if they want to waste money, to waste it efficiently, and/or to cut their losses

Success criteria - Accurately simulate casino games, lottery, and/or stock options. Use it to either make money or conserve losses.

2 Criterion B

"The record of tasks and the design overview, including an outline test plan, are detailed and complete. From this information it is clear how the product was developed."

Research odds for many lottery games, research casino odds, etc.

Test plan... Just run enough sims to be accurate?

3 Criterion C

"The use of techniques demonstrates a high level of complexity and ingenuity in addressing the scenario identified in criterion A. It is characterized by the appropriate use of existing tools. The techniques are adequate for the task and their use is explained. All sources are identified."

Make a GUI for the product, nice and pretty, buttons, possibly animations?

Use Java's mathematical tools in order to make simulations

Noteworthy tricks - Looping, objects, loops, nesting loops, methods, tricks we've

learned in class in general, OOP principles, MONTE CARLO TO HELL AND BACK

Never too many games to simulate!

Betting system/house edge calculation?

Gravitating towards a casino simulator?

Different conditions (for example, in Blackjack, multideck, stand or hit on soft 17, etc...)

Automated card counter? Make a part of the program that lets one practice CCing?

Logging simulation records

4 Criterion D

"The video shows that the product functions well. Some expansion and modifications of the product are straightforward."

Perhaps make a promotional-style video

'Las Vegas' theme?

Some Sinatra BGM?

5 Criterion E

"The product is fully evaluated against the success criteria identified in criterion A including feedback from the client/adviser. Recommendations for further improvement of the product are realistic."