

Project Name: Paperclip game

Team Number: 7

## Overview:

A simple economic game in which you try to maximize the amount of paperclips you produce within a set amount of time. You have control over a lot of features which can impact the production of paperclips. It's in your power to choose these levels of production to maximize production. The goal is to reach 10,000 paperclips.

## Functional Requirements:

FR1: At the start of the game, you're the one making paper clips. When you make enough profit, you're able to invest in tools that more easily make paper clips.

FR2: By clicking the "make paperclip button", the user will manually make 1 paperclip

FR3: Lower the price/Increase price by button: Increases or lowers the price by 1 cent (affects public demand for paperclips). The public demand affects how fast you are able to sell your paper clips per second. Lowering your price increases your public demand percentage by 1 percent and increasing your price lowers your public demand percentage by 1 percent. You can sell a maximum of 20 paperclips per second. For example, if you are attempting to sell 20 paperclips in 1 second and your public demand is 20% then you were only able to actually sell 4 paperclips in that second. If your public demand was 29% then you would have sold 5 instead of 6 paperclips because the system rounds sales down to the nearest full paperclip.


FR4: Increase marketing level by 1 and thus the demand for paperclips. Increasing the marketing level helps your sales rate by allowing the player to sell their paperclips for higher prices or keep their price the same but sell more of it per second. Marketing level increases the public demand percentage by 25%.

FR5: Purchase more wire for paperclips. The price fluctuates between \$3 and \$5 everytime you purchase additional wire. The price will change to a random number between \$3 and \$5 dollars every time you purchase wire.

FR6: increase number of autoclippers by 1. Autoclippers automatically clip 1 paperclip per second passively.

FR7: Your goal is to reach 10,000 paperclips

## User Interface Prototype:

 Paperclip Game—□×

> Welcome to the paperclip game! You're goal is to manufacture 10,000 paperclips.

Paperclips: 0

Make Paperclip

Business

Available Funds: \$0.00

Avg. Rev. per sec: \$0.00

Unsold Inventory: 0

raise

lower

Price Per Clip: \$0.25

PublicDemand: 32%

Marketing

Marketing Level: 1

Cost: \$100

Manufacturing

Clips Per Second: 0

Buy Wire

16 inches

Cost: \$15

Auto Clippers

0

Cost: \$15

## User Interface Requirements:

UIR1: When the user hits make paperclip button, FR2 is executed.

UIR2: When the user hits lower/raise price button, FR3 is executed.

UIR3: When the user hits marketing button, FR4 is executed.

UIR4: When the user hits wire button, FR5 is executed.

UIR5: When the user hits AutoClippers button, FR6 is executed

UIR6: The number of paperclips, available funds, unsold inventory, price per clip, public demand, cost for marketing, cost for wire, are all displayed.

UIR7: Motivation/tips/interactive text on a black bar at the top

## Appendix

<https://www.decisionproblem.com/paperclips/index2.html>