**Criteria of Success**

**Goal:**

*The goal of this project is to create an interactive smart mirror, based on the C++ programming language.*

|  |  |  |
| --- | --- | --- |
| **Prompts** | **Student-Designed Criteria** | **Test or Method of Evaluation** |
| **Form:**  What will your project look  like?  What materials will you use?  What size will your project be?  What tools will you use?  How will you assemble your project? | * My finished product should look exactly like a normal mirror, when idle. Once it is turned on, the user-interface elements should be clear and easy to interact with. * Wood, super glue, nails, two-way mirror, raspberry-pi and a display that fits the mirror (most likely a 24 inch one). * 12 x 24 inches * Measuring tape, hammer, drill and sandpaper. * Setup and connect the raspberry pi to the display, install any software that I need at this point. Attach the raspberry pi to the back of the display. Verify that everything is working up to this point and mount the mirror onto the display. Build the wooden frame around the mirror and display. Use the sandpaper to smooth out any rough edges. Verify that everything works. | * Survey family members on whether or not the product looks like a real, ordinary mirror once it’s turned off and whether the UI elements are clear and legible once it’s on. * The product will only function properly if the correct materials are used. * Measure the finished product using measuring tape. * The product will not be properly assembled if the appropriate tools are not used. * Verify the product’s functionality. |
| **Function:**  What is it the purpose of your project? | * Provide useful information about the day, like the weather or news headlines, while still retaining all the functionality and simplicity of a normal mirror. | * Create a survey incorporating questions about the ease of use and functionality of the mirror for users who have had a chance to use it. |
| **User/Audience:**  Who is your project for?  What do you want your project to do?  Where/why will your project  be used? | * Anyone who would like to get some information about the day, while getting ready, in an unobtrusive and distraction-free way. * Provide the user with basic information about the day, without distracting them from whatever task they may already be doing. * This product can be used in any bathroom or dressing room to provide the user with useful information. | * Allow a select group of people to test the product for an extended period of time and then ask them to complete a survey about the day-to-day usability of the product. |
| **Costs:**  How much will your project  cost to make?  How much will you sell it for?  How much profit could be made on your item/project? | * *(All costs are in AED)*   + Two-way mirror = 180   + Display = 200 -500   + Frame = 100 -200   + Raspberry Pi = 150   + Total Cost = 630 – 1030 AED * If I was to sell my product I would want at least a 25% margin, making the cost: 787.5 – 1287.5 AED. * I would make a 25% profit. | * Provide receipts as proof of purchase. * Try selling the product to see how many people would buy it and how much profit would actually be made. |

**Student Designed Criteria**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Aesthetics** | **Function** | **User Friendliness** | **Costs** |
| **7-8** | The product looks like an ordinary mirror when it is powered off. When it is powered on there is no backlight ‘bleed’ and all UI elements are clear. | The mirror displays any and all useful information the user may want, like time, weather, a news feed and more. It is fully customizable/modular and does not clutter the view in any way. | The product can be used and customized by anyone from any age group with little to no effort. The language of the user interface can also be changed. | The product only costs around 600 AED to build, inclusive of shipping charges and does not compromise any quality for the lower price. |
| **5-6** | The product almost looks like an ordinary mirror when it is powered off. When it is powered on there is very little backlight ‘bleed’ and all UI elements are fairly clear to the point where they are legible. | The mirror displays many widgets with useful information the user may want, like time, weather, a news feed and more. It is customizable/modular to an extent and does not clutter the view that much. | The product can be used and customized by most people aged 12-50 with some effort. The language of the user interface can also be changed. | The product costs around 800 AED to build, inclusive of shipping charges and does not compromise any quality for the lower price. |
| **3-4** | The product resembles an ordinary mirror when it is powered off. When it is powered on there is some backlight ‘bleed’ and the UI elements are somewhat legible. | The mirror displays some widgets with useful information the user may want, like time, weather, a news feed and more. It is barely customizable/modular and can sometimes clutter the view. | The product can be used and customized by some people aged 18-50 with an adequate amount of effort. The language of the user interface cannot be changed. | The product costs around 1000 AED to build, inclusive of shipping charges. The price is somewhat justifiable by the overall quality of the product. |
| **1-2** | The product does not look like a mirror, when it is powered on it is not possible to read or see any of the UI elements. | The mirror displays no widgets with useful information the user may want, like time, weather, a news feed and more. It is not customizable/modular and almost always clutters the view. | The product is barely usable and cannot be customized in any way. The language of the user interface cannot be changed. | The product costs more than 1000 AED to build, inclusive of shipping charges. The high price is not reflected at all by the overall quality of the product. |