

Task List

Scenario 1: You are at the gym and you want to check out the E-trainer.

Task 1: Check-out the E-trainer.

Scenario 2: You want to start the workout and stretch.

Task 2: Watch the stretch video/tutorial.

Scenario 3: You want to continue warming up through cardio workouts.

Task 3: Watch the bike videos.

Scenario 4: You prefer to watch instructional videos of more cardiovascular exercises.

Task 4: Watch instructional videos of more cardiovascular exercises.

Scenario 5:

You are feeling very energetic while cycling and you want to change the tension level.

Task 5:

Increase the tension level.

Scenario 6: Now you have warmed up and want to begin the actual workout.

Task 6: Go to the rowing machine and watch the tutorial/videos.

Scenario 7: You have a leg cramp. You want to stop for a minute.

Task 7: Stop the current workout.

Scenario 8: You want to check the current statistics of your workout.

Task 8: Check the statistics.

Scenario 9: You are bored.

Task 9: Check out entertainment.

Scenario 10: You want to watch a sports game.

Task 10: Check out the TV channels.

Scenario 11: You are bored watching the sports game on the TV.

Task 11: Check out the radio stations.

Scenario 12: You are finished with the cardio workout, and you want to continue the workout.

Task 12: Watch the pull bar videos and watch the tutorials.

Scenario 13: Your friend starts talking to you.

Task 13: Turn off the volume.

Scenario 14: You stop talking to your friend and you want to turn the sound on again. You also want it lower than before.

Task 14: Turn the volume on and decrease the sound.

Scenario 15: You are ready to begin exercising your lower body.

Task 15: Watch the leg press video tutorials.

Scenario 16: You prefer to increase the difficulty level and the length of your workout.

Task 16: Increase the difficulty level and the length of your workout.

Scenario 17: You prefer to increase the difficulty level and the length of your workout.

Task 17: Increase the difficulty level and the length of your workout.

Scenario 18: You want to change the gender of the video tutorial performer according to your preference i.e., Bill or Connie.

Task 18: Change the gender of the video-tutorial performer.

Scenario 19: Your lower body exercise is done and you want to begin the abdominal workouts.

Task 19: Watch the abdominal crunches video tutorial.

Scenario 20: You are done with your workout, and ready to do some cool down stretches.

Task 20: Watch the cool-down stretch videos

Fitness Quest eTrainer Test 2

User Chad

Tester Matt

Date/Time 11/27/07

After getting dressed at the gym, you have been given a Fitness Quest E-Trainer workout device to use. Your objective is to get through an entire workout (don't worry, you won't have to touch your toes). We will interrupt you periodically to ask you to perform certain tasks, just do them as well as you can. Please speak out loud your thought process as you approach each task. Throughout the workout, the device will refer to you as "Caroline," just imagine your name there, instead.

Scenario 1: You are now ready to begin your workout routine

Task 1: Go through the *entire* workout routine presented by the E-trainer device.

Start time: 12:40

ERRORS: _____ Be sure to take notes on all errors.

NOTES: The objective here is to have them push "NEXT" at each screen. Any other button pressed would be an "ERROR" and should be noted.

easy to follow initial instructions

change of text is obvious

** Possibility of Level up eventually is "enticing"*

tool bar at bottom of video screen is confusing in reference to video options on Right.

→ Stretches. Anxiety, unsure how many there will be. use "stretch 3/4"

Scenario 2: bike 1

You are feeling very energetic while cycling and would like to increase the difficulty of your workout.

Task 2:

Increase the tension level of the bike up one level.

Start Time: _____

ERRORS: _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them move the Tension Bar up. Any other button pressed would be an "ERROR" and should be noted.

- Cycling measure about radial feedback on bike
- video is clear
- heart rate is clear.

Scenario 3: bike 2

You are getting a bit bored while pedaling the bike and you remember that the Husky Basketball game is on CBS.

Task 3: Find the Basketball game on CBS

Start Time: 12:46

ERRORS: _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them select Entertainment Tab, then click "channel up" until they are on channel 3. Any other button pressed would be an "ERROR" and should be noted.

pa. 7

not sure where he watches the game

link was automatic

Scenario 4: bike 3

Return to your workout screen.

Task 4: Return to the workout screen

Start Time: 12:46

ERRORS: _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them select the Workout Tab or Back button.

- going back from entertainment to workout is not clear. should go straight back to the bike, not main.
-

Scenario 5: bike 3

You have a leg cramp. You want to stop for a minute.

Task 5: Stop the current workout.

Start Time: 12:48

ERRORS: _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them push the stop button.

09:57

Scenario 6: bike 4

Your leg cramp is gone now.

Task 6: Resume the current workout.

Start Time: 1248

ERRORS: _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them push the Resume button. After this task, they can move to tab 13 (end of the bike workout.)

the resume / next buttons not clear from stop

Scenario 7: rowing 1

You are getting a bit worn out on the rowing machine and are curious how long you will be doing this exercise for.

Task 7: Check how much longer you have left on the rowing machine.

Start Time: _____

ERRORS: _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them push the hourglass button.

- very clear
- amount of time vague, use values.

Scenario 8: rowing 2

The basketball game is over. You decide you'd rather listen to the Fitness Quest Instructions Music Station.

Task 8: Find the Fitness Quest Instructions radio station.

Start Time: _____

ERRORS: _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them push the Entertainment Tab. (Tab D)
Then push the Radio Button (Tab E)

remembered from before

Scenario 9: rowing 3

Your friend starts talking to you. You can't hear them over the noise of the headphones

Task 9: Turn off the volume.

Start Time: _____

ERRORS: *\$* _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them push the Speaker button. (Tab F)

got speaker button.

Scenario 10: rowing 4

You stop talking to your friend and you want to turn the music on again.

Task 10: Turn the music back on.

Start Time: _____

ERRORS: _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them push the Speaker or Radio button.
(Tab E) After this task, they can move on to the end of rowing (tab 18)

font

Scenario 11a: End of leg press 1 (Tab 23)

You feel as though you would like a more intense workout than the eTrainer is providing you.

Task 11a: Try to increase the difficulty level.

Scenario 11b: End of leg press 1

after the warning, you change your mind about increasing the difficulty level.

Task 11b: Do not change the difficulty level.

Start Time: _____

ERRORS: / **Be sure to take notes on all errors.**

NOTES: The objective here is to have them push the Preferences Tab (Tab G) then increase difficulty (Tab H) then push No and return to preferences (Tab G)

- workout tab first. tension level, realizes only for rowing, not overall
- then to preferences, call it work out preferences

Scenario 12a: End of leg press 2

You are getting tired, and are thinking about cutting your workout short.

Task 12a: Try to decrease the length of the workout.

Scenario 12b: End of leg press 2

After the warning, you change your mind about decreasing the duration of your workout.

Task 12b: Do not change the difficulty level

Start Time: _____

ERRORS: _____ **Be sure to take notes on all errors.**

NOTES: The objective here is to have them push the Preferences Tab (Tab G) then decrease duration (Tab I) then push No and return to preferences (Tab G)

From part, it is clear.

Scenario 13: End of Leg Press

You want to change the gender of the video tutorial performer to a woman.

Task 13: Change the gender of the video-tutorial performer to a woman and then return to your workout.

Start Time: 12:54

ERRORS: 1 Be sure to take notes on all errors.

NOTES: The objective here is to have them push the Preferences Tab (Tab G) then Workout Partner (Tab K) then push Connie (Tab L) and return to workout (Tab 23)

*clicked on video tab, not workout partner
then, it was clear.*

Scenario 14: End of work-out

You are done with your workout, and ready to do some cool down stretches.

Task 14: Watch the cool-down stretch videos

Start Time: _____

ERRORS: _____ Be sure to take notes on all errors.

NOTES: The objective here is to have them end the workout.

pull bar. relevance of video to text is obvious.

after awhile, just cruising through text.

3 sets in text

2 sets listed

"right watch the video, form is important"

Should state this? what if user thinks they ~~can~~ know it.

importance of stretches at end is obvious.

after seeing more videos/screens ~~the~~

it is obvious. Learning curve is quick

Questionnaire

Please fill out this questionnaire to the best of your ability. Feel free to use the back if you need additional room to write down your thoughts.

Age: 27 Gender: M Hours/week exercise: 0

1. Did you like using this tool?

Not Really 1 2 3 4 5 6 7 8 9 Very Much 10

Specifically, why or why not?

I like the tracking of repetitions and resistance for the exercises, when I work out I scribble in a notepad and it doesn't work very well.

2. If this tool were available in the gym, how likely would you be to use it?

Not At All 1 2 3 4 5 6 7 8 9 Very Likely 10

Specifically, why or why not?

I might feel self conscious using this at a gym where few people were using it, or if only women were using it (stupid, I know)

3. What things do you like most about the user interface?

It's consistent - after a few interactions I could predict how it would respond.

4. What things do you like most about the prototype?

Good size & weight. Screen size is big.

* convert these in numbers on all surveys and avg. them out in the score card.



5. What would you change about the user interface?

I didn't like having to go to the home tab to move on to the next workout - I felt like I was going backwards. I wanted to be able to start the next workout from the workout screen.

6. What would you change about the prototype?

Maybe put a lanyard on it...

*

Evaluation Category	Test 6A	Test 6B
Average age of users	22	22.2 years
Female to Male ratio	3:2	1:4
Average exercise per Week	3hrs	4hrs
Likeability of interface	6.5	4.6
Likeability of concept	8	7
Errors Made	3	2.2
Time Taken	-	13 min
Overall Reaction	6	4.8

Analysis of test results

Product should be tested in context. Workouts can't be done in 13 minutes. Product seems tedious when not used at realistic pace/in realistic environment. Hard for users to make decisions about their workout routine outside of the gym.

Possible faulty test form/testing method. Perhaps new scenarios could capture more useful data. A new testing strategy could be formed that focuses on more specific aspects of the interaction and interface design.

Difference between flipbook and electronic prototype. Tester has more control over pace with flipbook verses the electronic prototype.

Testing schedule and plan should be well formulated. The second round of tests was more rushed to get finished than the first. This could easily carry over in how the tests were performed/data collected.

Considerations for next design phase

Long term usage: The amount of text and menus that users have to go through in one session should be shortened. The user should have the option for a simplified experience with the eTrainer.

Iconography and labeling: There needs to be a more direct mapping between some of the icons (time line).

Explicit instructions: Although users tested understand the system once they use it for awhile, a key to this product is that it needs to be much more intuitive during the initial use.

Fitness Quest eTrainer Test 1

User _____

Tester _____

Date/Time _____

After getting dressed at the gym, you have been given a Fitness Quest E-Trainer workout device to use. You are very excited about having a new tool to help you with your exercise routine.

Scenario 1: You are interested in learning how the E-trainer will help you at the gym today.

Task 1: View the introduction.

Scenario 2: You are now ready to begin your workout routine

Task 2: Go through the *entire* workout routine presented by the E-trainer device.

Scenario 3: bike 1

You are feeling very energetic while cycling and would like to increase the difficulty of your workout.

Task 3:

Increase the tension level of the bike up one level.

Scenario 4: bike 2

You are getting a bit bored while pedaling the bike and you remember that the Husky Basketball game is on ABC.

Task 4: Find the Basketball game on ABC

Scenario 5: bike 3

You have a leg cramp. You want to stop for a minute.

Task 5: Stop the current workout.

Scenario 6: bike 4

Your leg cramp is gone now.

Task 6: Resume the current workout.

Scenario 7: rowing 1

You are getting a bit worn out on the rowing machine and are curious how long you will be doing this exercise for.

Task 7: Check how much longer you have left on the rowing machine.

Scenario 8: rowing 2

It turns out that the basketball game ended. Instead, you decide you'd rather listen to the Fitness Quest Instructions Music Station.

Task 8: Find the Fitness Quest Instructions radio station.

Scenario 9: rowing 3

Your friend starts talking to you. You can't hear them over the noise of the headphones

Task 9: Turn off the volume.

Scenario 10: rowing 4

You stop talking to your friend and you want to turn the music on again.

Task 10: Turn the music back on.

Scenario 11a: End of leg press 1

You feel as though you would like a more intense workout than the eTrainer is providing you.

Task 11a: Try to increase the difficulty level.

Scenario 11b: End of leg press 1

after the warning, you change your mind about increasing the difficulty level.

Task 11b: Do not change the difficulty level

Scenario 12a: End of leg press 2

You are getting tired, and are thinking about cutting your workout short.

Task 12a: Try to decrease the length of the workout.

Scenario 12b: End of leg press 2

After the warning, you change your mind about decreasing the duration of your workout.

Task 12b: Do not change the difficulty level

Scenario 13: End of Leg Press

You want to change the gender of the video tutorial performer to a man.

Task 13: Change the gender of the video-tutorial performer to a man.

Scenario 14: End of work-out

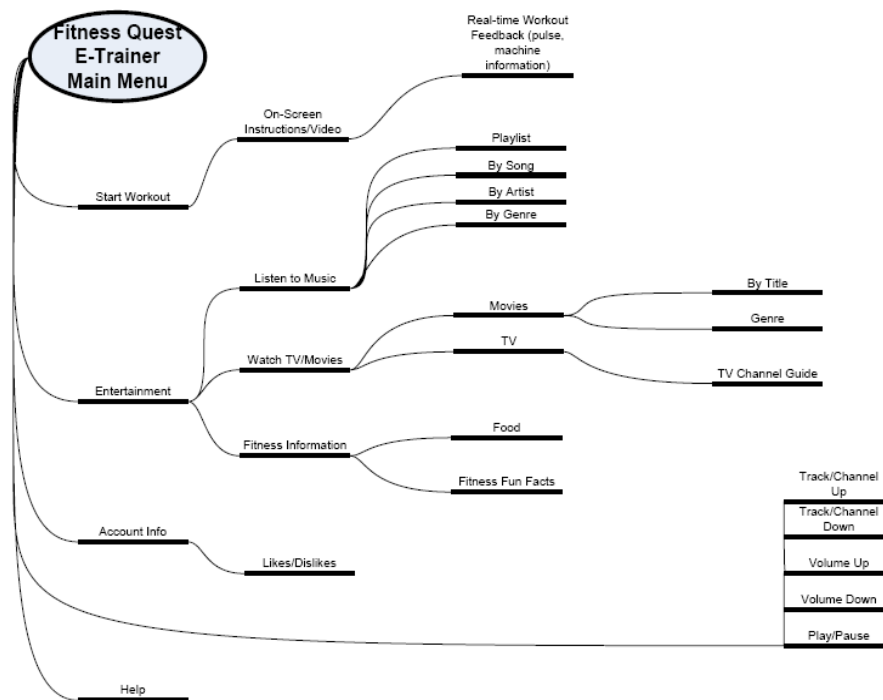
You are done with your workout, and ready to do some cool down stretches.

Task 14: Watch the cool-down stretch videos

Description of your final interface design

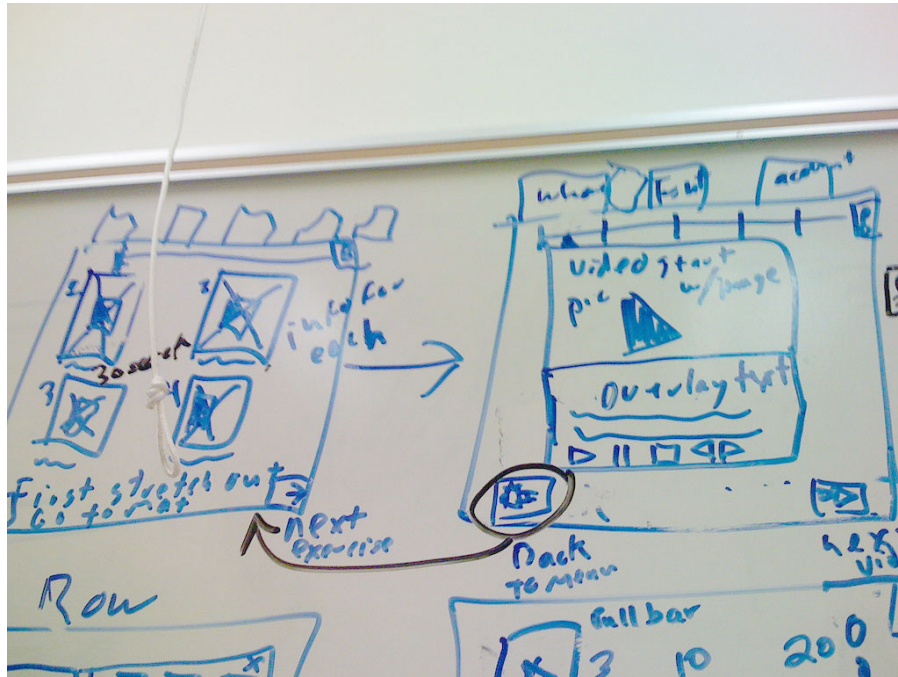
The final design of our product went through a number of phases, tests and trials, and changes. We will discuss the different phases and the changes we made as we moved along in the process of designing the final design of our interface. Each phase concentrated on a different outcome but as a whole, all of them contributed to our final product design. We focused on the data embedded in the device and then we categorized the information in the form of a system map. Then we made detailed sketches of how we want our device to look like when a user logs into it. We made sketches and mock ups to get a pre-picture of the working device. After having a rough idea of the attributes that were most important, we came up with a final design for our machine.

System map



The focus of our device is based on the user interaction with its hand held features. Our system maps define how the user will be lead step by step to the phases needed to be followed a full one day workout. The main categories for the users are workout, account info, entertainment, preferences and help. So accordingly, we needed to make five main category tabs and then sub tabs for sub options. Also, we wanted all the images, videos and buttons to be clear to the user, that's why we decided to have a brief explanation after each of the images and icons we used. Also, we tried our best in using the icons or images that people are used to see for example the 'back button' or the 'next button' etc.

Sketches and Mockups



The workout video design was made after reviewing the designs of ‘Youtube’ and used standard icons for play and reverse buttons. Under the videos, we left room for a brief description of the stretches being performed in the video because we made sure that the users completely and properly understood what the stretch was asking from them or what they were asked to do exactly. There were some problems we encountered in the design phase like we had a backward arrow for our timeline but after our first round of testing, we fixed the problem by reversing the direction of the arrow.

Hardware design

The user had most of the interaction with the touch screen of the device. So we focused on the size of the screen since it played the most important role. A gray border was made around the screen to define the area of the screen and adequate space was left on either side of the screen for fingers while carrying it. The space prevented the users touching the screen or pressing buttons while holding the device. Also, the user had to carry it around in the gym from machine to machine, so we made sure that it had good grip handles making it convenient for the user to hold it in hand easily. There were two handles on either side for left handed and right handed users since our audience is so broad for the device. The weight was another issue. We didn’t want it to be too heavy for the users and make it difficult for them to carry around and at the same time, we didn’t want it to be light weight for the users to think it’s not valuable because if something is light-weight, people tend to think it’s not valuable. This led to us to the size of the device which we didn’t want to be too big so we made it to a size of standard portable device that would

get the point across though the videos with clarity. The size of an iphone or an ipod wouldn't have worked because in that case it would be hard for the users to watch the videos and text with great clarity.

Other aspects of the device include the hold button at the top, the headphone opening at the bottom and the dock for synchronizing the device in the back. The Hold button puts the sleep on rest mode or sleep mode. If the users want to put the machine on rest mode when they're talking to someone or doing other stuff, they can simply use that button to do so. We made the headphone opening at the bottom because we didn't want the headphone wire block the view or cover any of the front part of the device.

In the end, we wanted a shape that would act as a dock, as our data transferring opening and as a slider in the stand on all the machines. Therefore, we came up with this V-shape growth in the back that slides into the stands on all the machines, its hooked to the dock for synchronizing while its clinged on the stand. and when the device is turned in, this is the place that transfers all the data to the database of the gym and is made available on the web for respective users. The users then are able to access their information through their home using the gym's website. All that a user needs to log in is the membership card number.

Mostly, all the errors were minor and the user was able to go through the tests and different phases through an easy flow. We met the defined goal and our results collected through trials reflect that as well.

Process you followed in completing your design (refer to appendices)

Steps: Interface design process

It would be very easy for our group to overshoot, and attempt to develop a plan that would try to fully encompass all aspects of exercise and nutrition. Already, in our brainstorming sessions we have generated a large number of concepts and ideas that we find interesting. However, due to the time constraints of a one-quarter long project, our scope needs to be considered from the very beginning. Therefore, we may need to limit our focus to either a device that solely tracks exercise or solely tracks the nutritional habits of the user. If both exercise and nutrition are addressed in the project, one will be designated as the primary function and one as the secondary.

In our process of completing the design of the interface, we used many sources provided by our professor. The very first one I will discuss is the 'Thinking Hats'. Our first step was according to the first hat i.e., 'the white hat.' We gathered all sorts of information for our product. We went to gyms, consulted members who had been a part of the gym for few years to few months. We also consulted people who had never gone to a gym. We listed all the points regarding why a person goes to the gym, what the user wants to see improving or more of or less of. We also tried to identify the reasons what

the negative points or discouraging points were that made people feel negative about gyms. After gathering enough data in this phase, we moved on to the 'Green Hat' where we categorized and organized our findings and generated our own ideas based on the data and our personal experiences. This helped us design a rough base of our project. Then the 'Yellow Hat' helped us divide our data into logical and positive list. The logical list had the objectives that were realistic to achieve and were very common among most of the participants and users.

Also, this is where we blended our 'black hat' phase and we started testing our own ideas for their authentication and their practicality. This is where we used our 'Blue Hat' because we were testing the logical and less logical ideas so we sort of made it one step. After defining our goals and objectives that we wanted to incorporate in the device, we moved on to the next hat the 'Black Hat'. A lot of our ideas were rejected in the previous phase but we focused more on them during our black hat phase. We were able to eliminate all those ideas that interfered with other fields or other problems that weren't a part of our goal. We highlighted the most powerful ones like the device shouldn't be out in the market as an individual object because it would require its own certified machines so a whole gym with this device embedded as a component of the system is a realistic way of introducing it. We didn't want to make it a medical device that would guide the users in their health problems so we just limited it to workout routines and less of the nutrition and diet issues.

At the end, we used the 'Red Hat' and went on with our gut feeling about design issues like how many tabs should appear on the top at all times and what icons we should use, or we used the colors we thought looked clear and professional.

In the beginning, we tried to overstep the first couple of phases but then we focused on the '10 commandments' provided by Professor Furness. At first, we had a very broad audience for our device but then we reduced it down to the people who mostly go to the gym. We were lucky that we focused on the device and its features instead of picturing out the device. We tested it many times because we knew we weren't the users and our audience would consist of many novice users. We reviewed the applications of the popular and successful devices in the market today and designed ours accordingly. We observed a lot of other devices and decided to keep our device very simple and convenient to use.

The design process helped us learn that surveys and suggestions are very important and helpful. We need to be thorough in taking notes when our testers are interacting with the device. It helped us a lot in improving certain applications. The only thing that can be improved is making the phases more defined and focused on certain target objectives. Sometimes the objective wasn't clear so students were not able to perform up to the mark. But most of the time, the design process was very accurate and effective.

What was learned by working in your group (what do you want to make public)?

I learned that diversity is very important. Different ideas from diverse backgrounds help improve the application or device very effectively. And this helps to get the point of the device across to a very broad audience. I also learned that at times it's not easy to work together and we get feelings of just working on it alone and getting stuff done. But after working together and getting to the end made me realize that it's important to work as a team, especially in usability. It's because different minds and eyes work differently and we can cover many aspects in a short span of time.

What did you learn from the 455 course experience? (each individual in group should comment)

From the 455 course, I learned that designing is very hard. It's definitely not as easy as I thought it would be. My focus is on Usability but this course made me realize that it's very critical and delicate. Even the tiniest things and minute details matter. One minor error can ruin the whole design.

Summary & Conclusions

What are the bottom lines you draw from your experience?

The whole experience of designing a device and working with people with different backgrounds made me realize the importance of how successful it is to work in a diverse team. It also helped me understand that not all people think the same. A lot of members in my group focused on the technicalities and a lot focused on perfection. It was a great learning experience which helped me prepare for a lot of future assignments. The best thing I liked about my group is that no idea was thrown in the trash, no opinion was wasted and everybody respected each other's view. An idea may seem stupid on paper, but in application, it could be the most brilliant.