

Team F6

Plasticity Modeling-F6

Jan 25th, 2018

Second semesters Meetings

Members:

Abdullah Almutairi

Nawaf Alkhalaf

Omar Almutairi

Mutairan Alhabashi

Meeting Minutes

General Announcement:

Here we get back again for ME486C. All the members are very happy to get in the manufacturing the project as we have our final idea ready and just need to work on. The overall design doesn't change in term of the design shape as with the shape we have its going to meet the CR's and ER's. However, we probably are going to change all the sensors chosen from last semester, because our way of collecting the data is changed now and we need to have the total force in both X & Y directions as well as the total distance and then graph those plot using MATLAB or Excel.

List of actions assigned for each member for week 2:

Omar Almutairi	<ul style="list-style-type: none">• Doing research to find appropriate sensors to use• Order the sensors after doing the research and make sure we got them at the beginning of the next we so we can get started.
Nawaf Alkhalaf	<ul style="list-style-type: none">• Figure out a way to fit all the sensors inside the box with no miss with the connections• Work with springs and the hooks and see what the best spring to use.
Abdullah Almutairi	<ul style="list-style-type: none">• Order the 8/20 Aluminum axials and those will use to be the walls.• Doing research to see a perfect sheet so we can use as a frictional surfaces.
Mutairan Alhabashi	<ul style="list-style-type: none">• Order the rubber sheet that will be added at the bottom of the base.• Look into a data view programmer and see if we can be useful for our project

Minute's week 3

Team F6 worked together in manufacturing the project. Every two members worked in building some parts. Nawaf and Omar did the aluminum and adding hooks to the sides of the project. Mutairan and Abdullah went to home depot and bought the wood. Also they added the fabric sheet to the wood. In the end Team F6 completed the parts of the project together.

Nawaf Alkhalaf	<ul style="list-style-type: none">• Updating the website• Working with Omar in building the Aluminum and fixing the hooks.
Omar Almutairi	<ul style="list-style-type: none">• Working on the solid work• Working with Nawaf in building the outside box frame.
Mutairan Alhabashi	<ul style="list-style-type: none">• Working with Abdullah in building the frame shape and the fabrics• Scheduling appointment with the client
Abdullah Almutairi	<ul style="list-style-type: none">-Working with Mutairan in building the frame shape and the fabrics- Adding all of the payments together and have the budget ready

Meeting Minutes

Week #4

ME 486C

Plasticity modelling-F6

This week, we meet with the client and the sponsor. We agreed in reducing the surface area of the device built. We also agreed to change our approach to measuring the distance. Instead of using laser, which could result in huge errors if the box was disoriented, we chose to use a computer mouse which will be more accurate in measuring the x and y displacement. This week we'll try to mount all the sensors as well as cutting down the total area into a perfect square.

List of actions for each member

Omar Almutairi	<ul style="list-style-type: none">• Cut the device in proper size• Modify the CAD package.
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Nawaf Alkhalaf	<ul style="list-style-type: none"> • Mount the sensors on the box • Help with the CAD package
Abdullah Almutairi	<ul style="list-style-type: none"> • Making sure new sensors arrive to be mounted. • Fix up a team proposal budget. Include only the items used to build the device.
Mutairan Alhabashi	<ul style="list-style-type: none"> • Help with cutting the device. • Help with the budget proposal.

Minutes week 5

Team F6 meet up for 6 hours to discuss about the project. Team members started to build the box and adding the sensor to gather for the project. Nawaf and Omar was working on the sensors setup and connection and abdullah and mutairan are cutting the shape of the design as the client requested smaller size. Nawaf and Abdullah were testing some sensors to see how they work.

Task assigned for each member this week:

Nawaf Alkhalaf	<ul style="list-style-type: none"> • Working on the website and updating it as we move forward with the project. • Connecting all the sensors to gather.
Omar Almutairi	<ul style="list-style-type: none"> • Updating the report with the new changes has been made. • Updating the Solid works as many things has been change.
Mutairan Alhabashi	<ul style="list-style-type: none"> • Is cutting the shape of the design with Abdullah to make it square. • Working on the Analytical Task topic
Abdullah Almutairi	<ul style="list-style-type: none"> • Is working with mutairan in fixing the shape of the design. • Working on the building the box with Nawaf.

Meeting Minutes
 Week #6
 ME 486C
 Plasticity modelling-F6

This week, we'll work on the connections of the sensors to the Arduino board. We'll also try to start on the coding part of the project. Minor testing would be done this week, we'll test if any data shows up when using the device. More testing will be done in the following weeks focusing on the accuracy and precision of the device. Each member will be responsible for his individual technical analysis.

List of actions for each member

Omar Almutairi	<ul style="list-style-type: none"> • Work on the connections • Plan for further tests required. • Help with code
Nawaf AlKhalaf	<ul style="list-style-type: none"> • Work on the connections • Start on Code
Abdullah Almutairi	<ul style="list-style-type: none"> • Help with code • Work on report.
Mutairan Alhabashi	<ul style="list-style-type: none"> • Work on the report. • Help with code.

Team: Plasticity Modeling- F6
 Date: 02/28/2018
 Location: Machine Shop

Recording of what happened during the meeting:

All the team attend the machine shop to try finish the final teaches in the design. We spent around 4 hours there while Omar and Nawaf was working with connecting all the sensors together and set them up, Mutairan and Abdullah was cutting the base to make it square shape as the client request and add some wood to the edges to make it trim. We did test the codes for the electronic weight sensors and they did work, however when we test the codes for ANDS-3050 Optical Mouse Sensors they didn't work because the mouse we had was the USB mouse and the codes that we have works for the PS2 mouse.

Meeting minutes week 7

Nawaf Alkhalaf	<ul style="list-style-type: none"> • Adding new stuff to the website • Working on the sensor
Mutairan Alhabashi	<ul style="list-style-type: none"> • Working on the edges of the design

	<ul style="list-style-type: none"> Working with Abdullah on the electronic weight
Omar Almutairi	<ul style="list-style-type: none"> Working on the solid work Testing the sensors
Abdullah Almutairi	<ul style="list-style-type: none"> Working on the base of the project Working on the electronic weight

Meeting Minutes

Week 10

ME486C

Plasticity Modeling-F6

What happened during the meetings?

All the members get back to gather after the spring break and they were so excited to get started with what we left with before the break. We need to add the final touches to our design and work on that codes setup, so we should be ready by the testing proof date. I will say that the team did a great job by finished the manufacturing part and the system is almost ready for the major components. We did work on the load cells and get the codes for them, so right now they are good to use and did give a sense value when we pull the springs. The only thing that we have to work with is finding the best codes that works with the mouse and then set it up through the Arduino program. Furthermore, we need to link the both load cells with the mouse after we got the codes for it and from there we will connected directly to a MATLAB to plot the graphs.

Meeting minutes week 10

Nawaf Alkhalaf	<ul style="list-style-type: none"> Set up the codes for the load cells and now we have values for both sensors in each direction. Working to find an appropriate codes that work well with our PS/2 mouse and editing the website with the latest updates.
Mutairan Alhabashi	<ul style="list-style-type: none"> Help Nawaf with editing the website and get it finished before the check 2. Working with the final touches for the overall design.

Omar Almutairi	<ul style="list-style-type: none"> • Work on how to link the Arduino directly to a MATLAB to have the plots. • Help Abdullah with a data view program to set it up.
Abdullah Almutairi	<ul style="list-style-type: none"> • Work in set up the data view through the thermal fluids lab to export the data from the Arduino and import it to Excel. • Helping Nawaf with playing around the connection to make it fit perfect inside the box with no loss or damages.

Meeting Minutes

Week #11

ME 486C

Plasticity modelling-F6

Date: April 5th ,2018

What happened during the meetings?

All the team members met at the library and we all was working on getting the design done, before the final testing proof with Dr.Oman. Our main job in this meeting is to figure out what is the issue with mouse and the ones we got. Finally we found out that this PS/2 was cheap and couldn't handle too many wires connection, due to the weakness of the DC converter. So The team decide to order a new PS/2 mouse and the new one is much better, fit well in the box and has a higher efficiency than the old mouse. Now, as soon as the mouse a the mouse we will start working on it and has the right codes to get it work perfect. We probably get the right code, but just need to have the new mouse to test it.

List of actions for each member

Omar Almutairi	<ul style="list-style-type: none"> • Working with operation and manual for the design and gather all the ideas to write on. • Have the final touches on the CAD package.
Nawaf AlKhalaf	<ul style="list-style-type: none"> • Working with drawing all the parts for the final CAD package. • Working with outline the UGRADS poster.
Abdullah Almutairi	<ul style="list-style-type: none"> • Help Omar with the operation and manual for the design. • Fixing the budget as well as work on finding several website that help the team define the codes.
Mutairan Alhabashi	<ul style="list-style-type: none"> • Help Nawaf with editing the poster for UGRADS. • Working on editing the first parts from the report.

Meeting Minutes
Week #12
ME 486C
Plasticity modelling-F6
Date: April 12th, 2018

What happened during the meetings?

This week, the team divided the work in half. Omar and Nawaf worked on the new connections and code. Abdullah and Mutairan were responsible for editing the report and poster. The parts we ordered arrived, as soon as everything goes well, the team can move on to installing the new parts in and testing the product. The goal is to be able to generate graphs before the testing. The team acknowledged the opportunity given by the instructor by extending the deadline. The team is aiming to get it done in time.

List of actions for each member

Omar Almutairi	<ul style="list-style-type: none">• Get everything ready for installment.• Test the product.
Nawaf AlKhalaf	<ul style="list-style-type: none">• Work on wiring and code.• Installment of new parts
Abdullah Almutairi	<ul style="list-style-type: none">• Editing the report.• Formating the UGRAD Poster.
Mutairan Alhabashi	<ul style="list-style-type: none">• Helping Abdullah with edits.• Prepare for testing in front of the instructor.

Meeting Minutes
Week #13
ME 486C
Plasticity modelling-F6
Date: April 19 ,2018

What happened during the meetings?

Team F6 met this week in the machine shop to finish from the design. All team members worked together as a team to finish everything that is remaining on the design. Team members added logos to the design one on the X-axis and the other one on the Y-axis. Omar and mutairan tried to make sure that the design is safety for example on the edges. Nawaf and Abdullah was measuring the box and making sure it is working. Team members opened the box to make sure the sensor and the Arduino is working.

List of actions for each member

Omar Almutairi	<ul style="list-style-type: none">• Went to the writing center to continue editing the report• Working on testing the product
Nawaf AlKhalaf	<ul style="list-style-type: none">• Testing the product with omar• Measuring the force
Abdullah Almutairi	<ul style="list-style-type: none">• Fixing section 7 of the report• Testing the product
Mutairan Alhabashi	<ul style="list-style-type: none">• Adding missing part on the design• Fixing the springs with abdullah

Meeting Minutes
Week #14
ME 486C
Plasticity modelling-F6
Date: April 26 ,2018

What happened during the meetings?

All team members met during week 14 in the engineering building to work on the final PowerPoints and editing the poster. Team F6 met 4 times that week to practice for the UGRD'S final presentation. All team members worked together as a team in practicing for the UGRD'S and for the poster. Team members divided the time of the poster between 9:00 a.m. to 10:00 a.m. omar and mutairan. From 10:00 a.m to 11:00 a.m. Nawaf and Abdullah.

List of actions for each member

Omar Almutairi	<ul style="list-style-type: none">• Got the poster and posted it in sky dome for UGRADS posters• Working on the CAD of the design
Nawaf AlKhalaf	<ul style="list-style-type: none">• Working on the poster• Editing the grammar on the poster
Abdullah Almutairi	<ul style="list-style-type: none">• Working on the poster• Working with mutairan on the final PowerPoint
Mutairan Alhabashi	<ul style="list-style-type: none">• Editing the poster• Adding new slides to the PowerPoints

Meeting Minutes
Week #15
ME 486C
Plasticity modelling-F6
Date: May 3 ,2018

What happened during the meetings?

Team members met in the engineering building room 112. Each team members contribute regarding the final presentation (UGRDS). All team members were working together in editing the final report specially by fixing the grammar. All team members worked together to finish all of the remaining assignments such as the cad, report and website.

List of actions for each member

Omar Almutairi	<ul style="list-style-type: none">• Editing the Final CAD• Editing the final report
Nawaf AlKhalaf	<ul style="list-style-type: none">• Working on the website• Editing the final report
Abdullah Almutairi	<ul style="list-style-type: none">• Is working with omar on the cad design• Editing the final report
Mutairan Alhabashi	<ul style="list-style-type: none">• Editing the final report• Helping nawaf with adding new documents to the website