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Design Thinking
Reflection - PD exercise - 2

I and my teammate started our prototype by figuring out the problem existing in the current potato peeler. I took a close look at the peeler that Dr.Robert gave us in class and made notes on the pros and cons. At that point I'm not aware, it is the base for generating new ideas and helps in developing the new product. I took more time in the first step for figuring out problems in the existing products because setting a mindset and acting on the same page with teammates is important in understanding, reaching and figuring out one solution. Finally, we figured out the problems **i.e Figure: 1**. From the problems, it is easy for us to set the objectives. But I think that at this point where I should improve my out of the box thinking because I m wholly depending and focusing only on problems to get my objectives. I should find a way to think beyond it. My teammate was able to bring many objectives because he didn't depend on the problems which made me think where I missed the hook point? In **Figure: 2** we did mapping and questioned it with respect to the functions of our new product. I faced difficulty in figuring out the functions. I need to focus more because I can't reach more than three functions. On the other hand, I also observed that asking questions is helping to find the functions and it shapes my work progress. I enjoyed drawing the possible elements for each function. As a team, we made a decision and that decision changed our prototype into a productive solution. For example, I asked the question "why not we design the peeler in a round shape?". Specific, This question entirely changed our product's idea and made us stand out in the market. In **Figure: 3** we discussed and entered the possible prototypes for each function and picked the most suitable one from each. Here, we followed a technique to eliminate and filter the options from not suitable to the most suitable components for each element. This technique of elimination was a time-saver, avoids conflicts, confusion, and shows a clear view of what I need? I would like to employ this technique in my future assignments. In **Figure: 4** we designed many prototypes for that product with the selected elements and finalized one from that by asking the questions like are we on the right path? We made many changes and overcome challenges. For example, if the blades are straight then there would be more food waste so we made the Blades bent slightly at the edges which we are not familiar with while doing the mapping process. From this, I learned that asking questions and employing the answers in real-time practice will help me to design a better product and help to eliminate major errors. In PD Exercise 1, I took too much time in designing the final product but in this exercise, I corrected my mistakes and followed every step so I did a productive work i.e **Figure: 5.** In **Figure:6** we designed our final product which is free from major errors and ready for practical implementation. From the process, I came to know that I have to improve my way of thinking and mindset in finding more objectives and spend time figuring out the functions. I learned that the answers that I get from questions should be implemented in realtime to see the effectiveness of the design from my observation. I would like to implement this technique in every future project I do. Also, I observed that to prototype, and design one must have creative thinking and to make them effective in real-time application it needs logical and analytical thinking. For example, we used springs to adjust the device to protect the shape of the potato.

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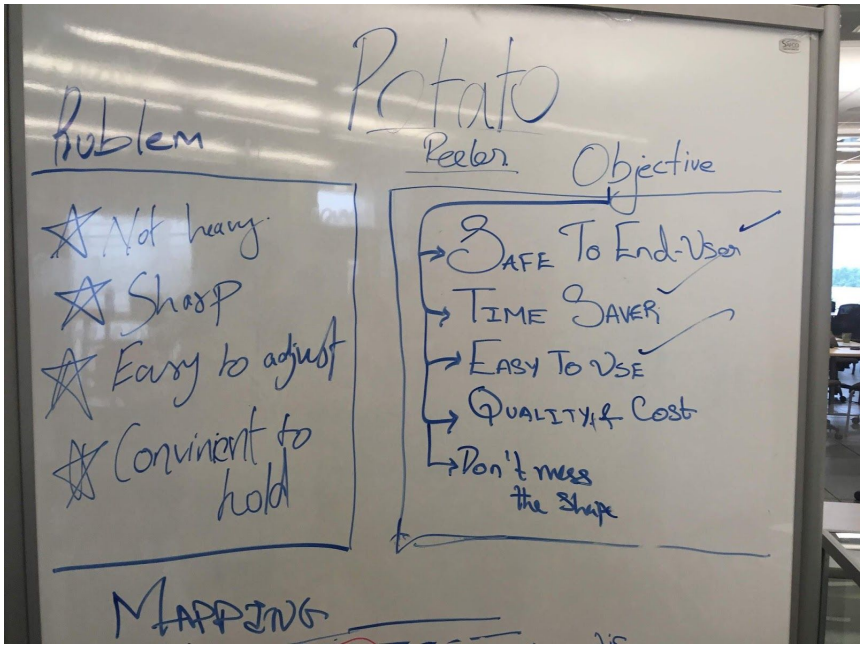

Figure: 1 - Problems and objectives

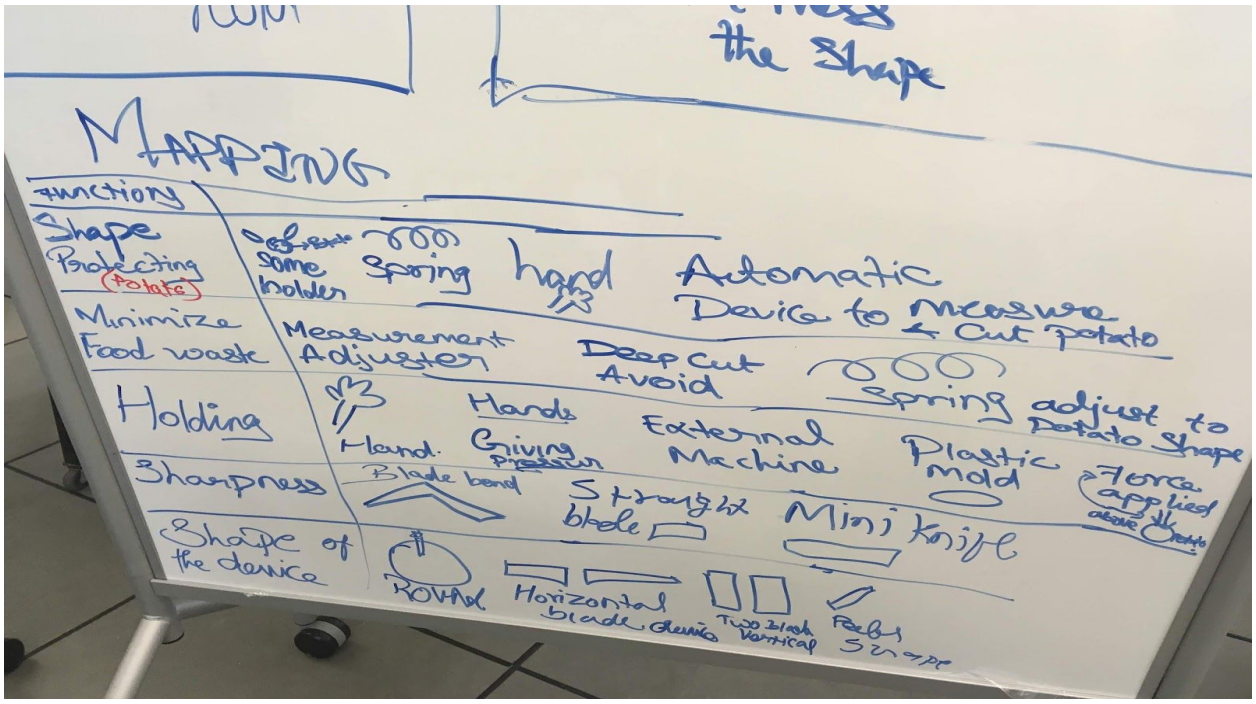

Figure: 2 - Mapping - The possible designs (prototype) to achieve the solution according to the required functions.

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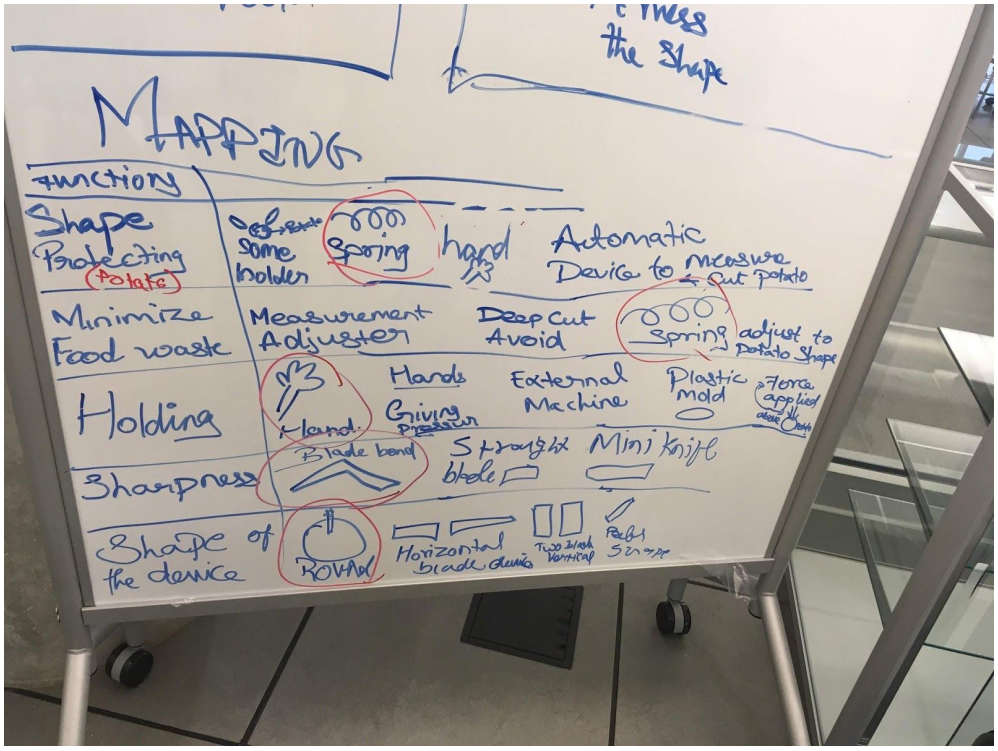

Figure: 3 **-** Selecting the possible prototypes from the mapping to design a better solution

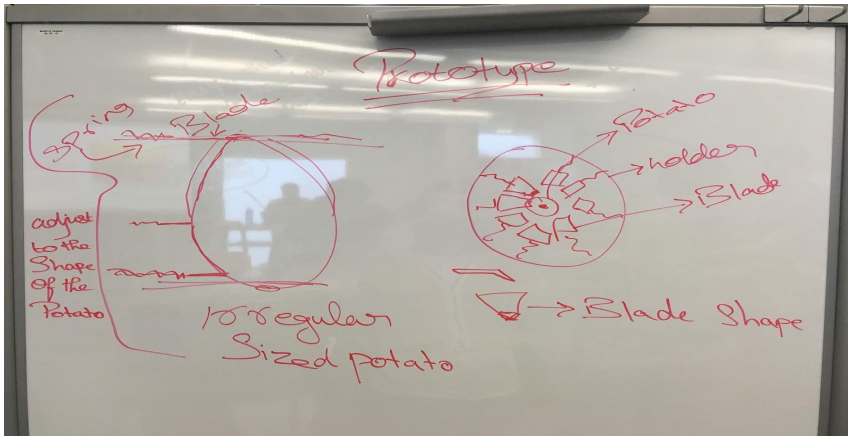

Figure: 4 - Designed a final product from the selected components.

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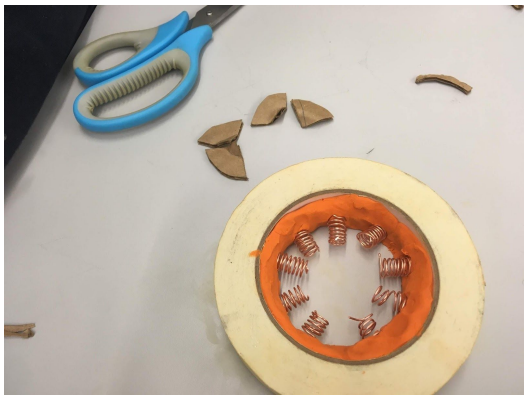

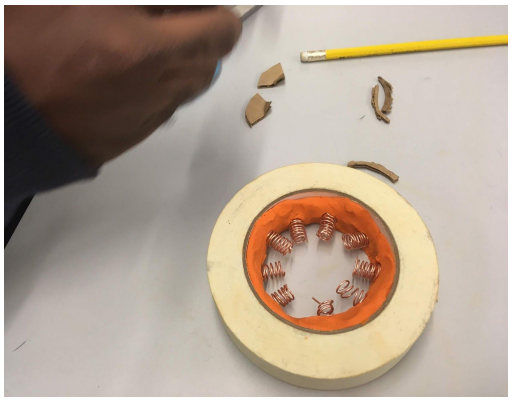

Figure: 5 - The initial stage of the prototype - Designing Blades and making possible improvements in the user perspective.

Figure: 6 - A new potato peeler is designed. The spring will make the peeler to adjust according to the shape of the potato. The product is user-friendly, don't consume time, the blades are sharp but it will not cause any harm to the user while working. To peel, the user should give a push by keeping the potato in the center of the blades.

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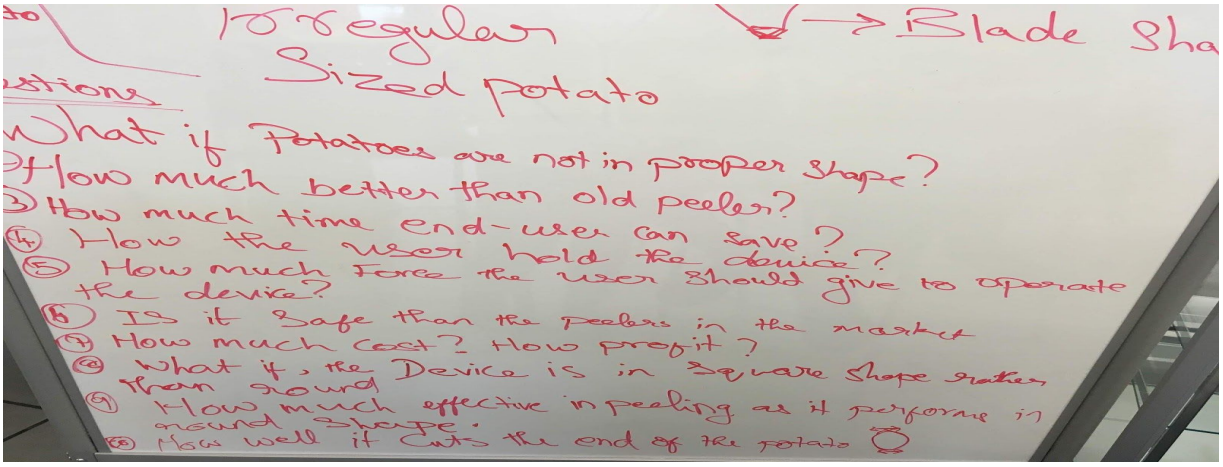

Figure: 7 Some of the questions we asked while designing the product.

Classification of Questions:

Divergent - Creativity, one question has multiple answers that starts with prompt, imagination, and possibilities.	**Convergent** - logical and analytical thinking, a single solution that starts with information.	**User vs Product vs Context**
1. What are the possibilities to make it 100% effective with further improvements?	1. What are the factors to consider while designing a new product?	1. What are the difficulties that are faced by the user while working with the existing one?
2. How to make it work with	2. Which prototype will be	2. Does it satisfy the need? And what are the

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all sizes of potato? 3. What if we use other elements rather than the selected ones? 4. Why should not we use the existing product? And why should we design a new peeler? 5. How to make it safe to handle?	the best suit the requirements? 3. How productive than the existing one in the market? 4. How many potatoes can it peel in a given time period? 5. What if the prototype does not function well?	needs of the user? 3. How it is user-friendly? 4. Does it save time? 5. How the user can hold the device while working? 6. How well the product that we design will be effective and different from the existing one?
6. What if, I design the product in round shape rather than vertical?	6. How & where to start the first step in filtering elements in the mapping process? 7. How much food waste can it cause? 8. Are we on the right path? 9. How to protect the shape of the potato?	7. What if the user doesn't feel comfortable using the product? 8. What are the pros and cons of the existing device?

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Statistics provided for convergent vs divergent question and user vs product vs context question:

The total number of questions for convergent vs divergent = 15
The total number of questions for user vs product vs context = 8

Total questions : 23

Convergent vs Divvergent question= 65.21%
User vs Product vs Context question = 34.72%