

EXPERIENTIAL LEARNING

While teaching Product Design and Development course, under new idea generation process, students were encouraged to come up with new product ideas by using brain storming technique. Surprisingly, given a little nudge, they came up with very good innovative ideas which can be executed with good research and improvisation. Not only did they come up with good ideas, they have evaluated their ideas by following idea screening techniques to understand how feasible the idea is.

Some of the product ideas are listed here:

Product-1:

Black Ice Melting Device

Proposed By:

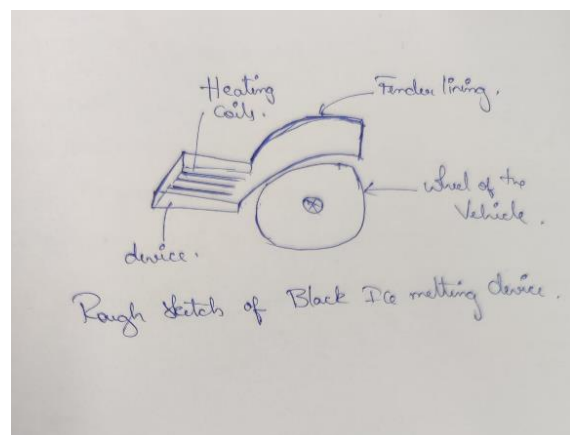
Black ice is the most common problem in the snowy regions, basically black ice is the thin layer of ice formed on the road, this layer is formed when the temperature reaches below freezing point of water while the roads are wet, hence a thin layer is formed and its transparent in nature, but due to presence of road under it, the name given as **Black Ice**.

This black ice is very slippery and will have zero grip for foot as well as tyres of vehicles so this product would help the vehicles get a good traction and make them easy to travel on road.

This product consists of heat sinks or heat generating elements which will function by taking power from the alternator or battery of the vehicle.

These heat generating coils generate a certain temperature which will melt the black ice. These devices are attached at the front of the vehicle at each tyre, as most of the vehicles are front wheel drive ones. The position of these devices is such a way that during travel tyres will be back of the device, so the tyre gets proper traction on the road.

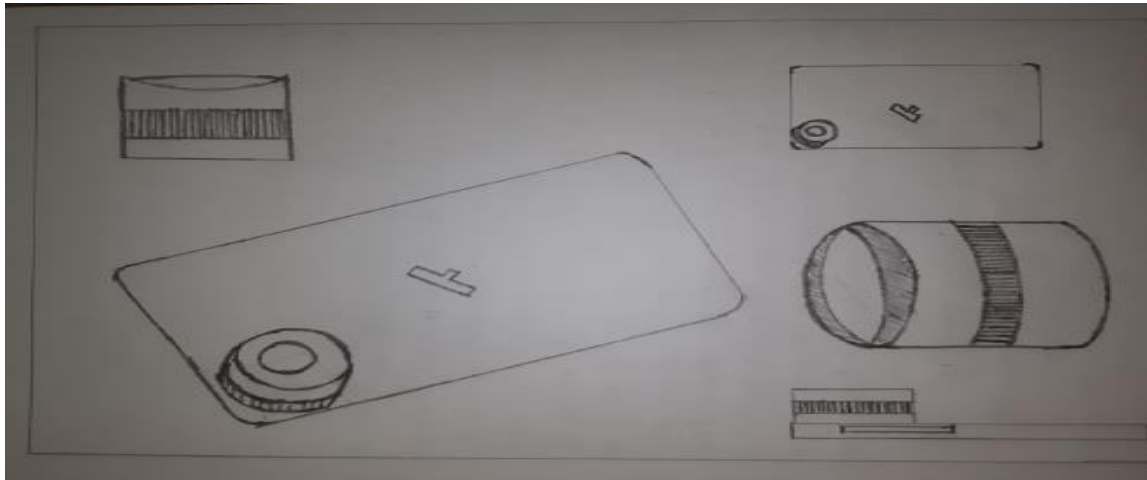
The main purpose of this product is to reduce accidents in the snowy-hill regions due to formation of black ice.



Product – 2:

Clip on Camera Lens

Proposed by: G. L. Mahith Simha Reddy



Name: clip on camera lens

Description:

The product is a camera lens which can be clipped onto any existing phone camera. The camera lens is a professional camera lens this can be used to increase range and clarity of the phone lens, unlike camera lens this is small in size and also not needed to be adjusted physically by zooming in and zooming out, the camera lens can be adjusted with the help of camera app in phone. The camera lens can be clipped on and removed when required, the camera lens helps eliminate usage of professional camera, we can take professional photos by just clipping on the camera lens and also it is easy to use and carry around.

Batch Number: 13

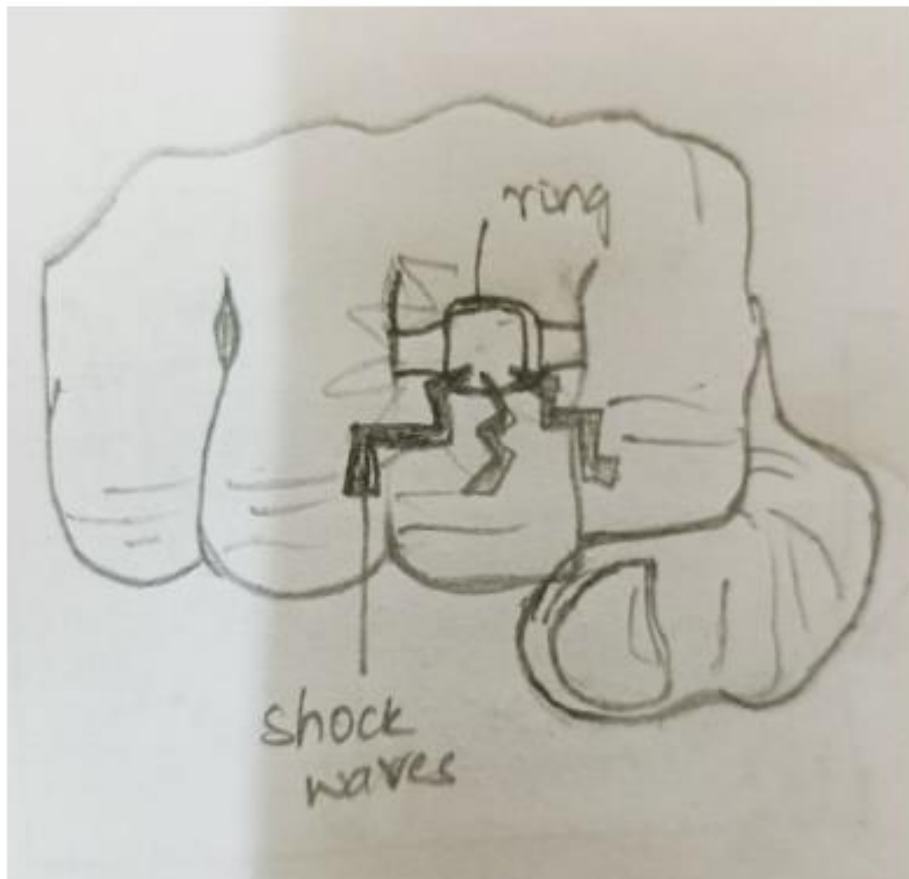
Name: G.L. Mahith Simha Reddy

Product Ideas from Batch 11:

NAME: Taser Ring

DESCRIPTION: A taser ring is a compact yet powerful self-defence accessory that combines style with functionality. A ring that not only enhances the fashion statement but also serves as a discreet personal safety device especially for women. Embedded within the design is a small but potent taser mechanism. This miniature electroshock weapon is capable of delivering a non-lethal electric shock, providing a quick and effective means of self-defence in threatening situations. The ring design ensures that it's easily accessible and can be activated with a simple motion, making it a practical and convenient tool for personal safety. It's like having a stylish guardian on your finger, ready to offer a jolt of protection when you need it the most.

SKETCH:



NAME: Stainless Tablecloth

DESCRIPTION: A stainless table cloth is the modern elegance for your dining setup. A tablecloth made from high-quality stainless steel fabric, blending sophistication with durability. This contemporary twist on traditional table linens not only adds a touch of sleekness to the dining area but also brings a unique and eye-catching element to the decor. The stainless steel material provides a smooth, polished surface that is not only visually appealing but also resistant to stains and spills. It acts as a stylish shield, protecting your table from the inevitable mishaps during meals. Easy to clean and maintain, a stainless table cloth effortlessly combines form and function.

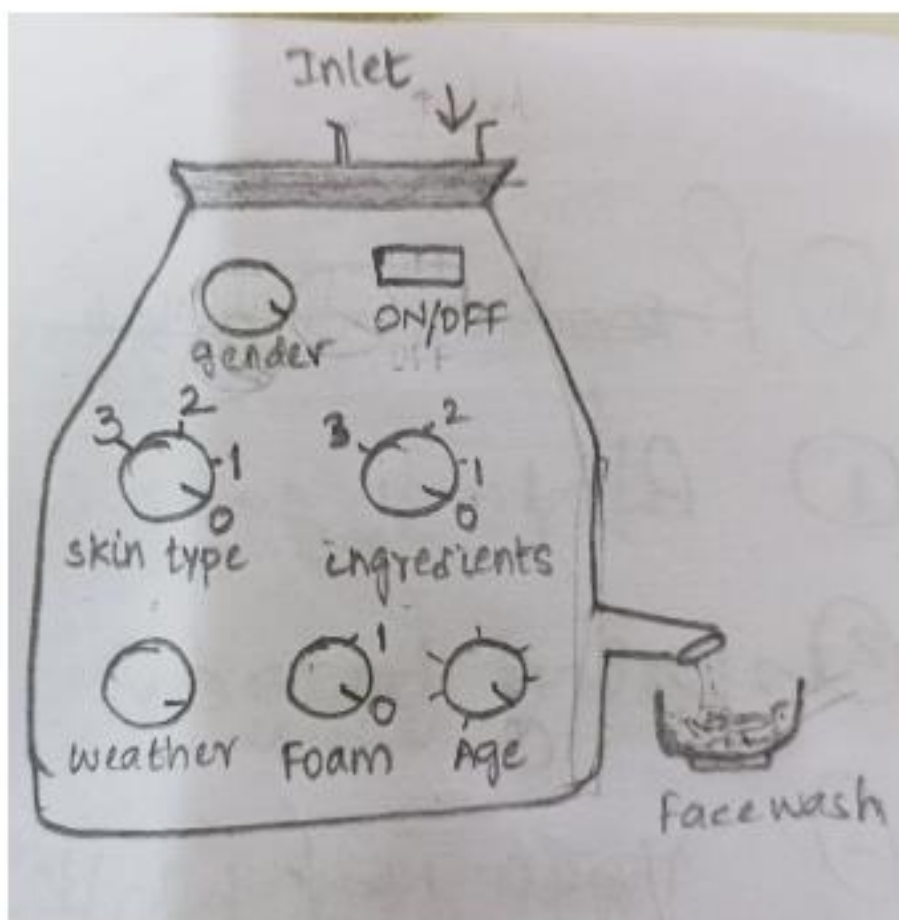
SKETCH:



) **NAME:** Face Wash Maker

DESCRIPTION: An Automated Natural Face Wash Maker is a device that produces the face wash from the ingredients (limited to three) added by the user. User has to select the specifications like skin type, age, foam or without foam, weather conditions and gender (as male and female have different skin textures). The ingredients along with the capsule containing few other essential oils required for the any skin are added at the inlet and after some time the well prepared face wash is obtained from outlet. Face wash obtained is customised, fresh, natural, ingredient selective, chemical free, effortless and within less amount of time. This face wash not only effectively cleanses your skin but also pampers it with the goodness of nature.

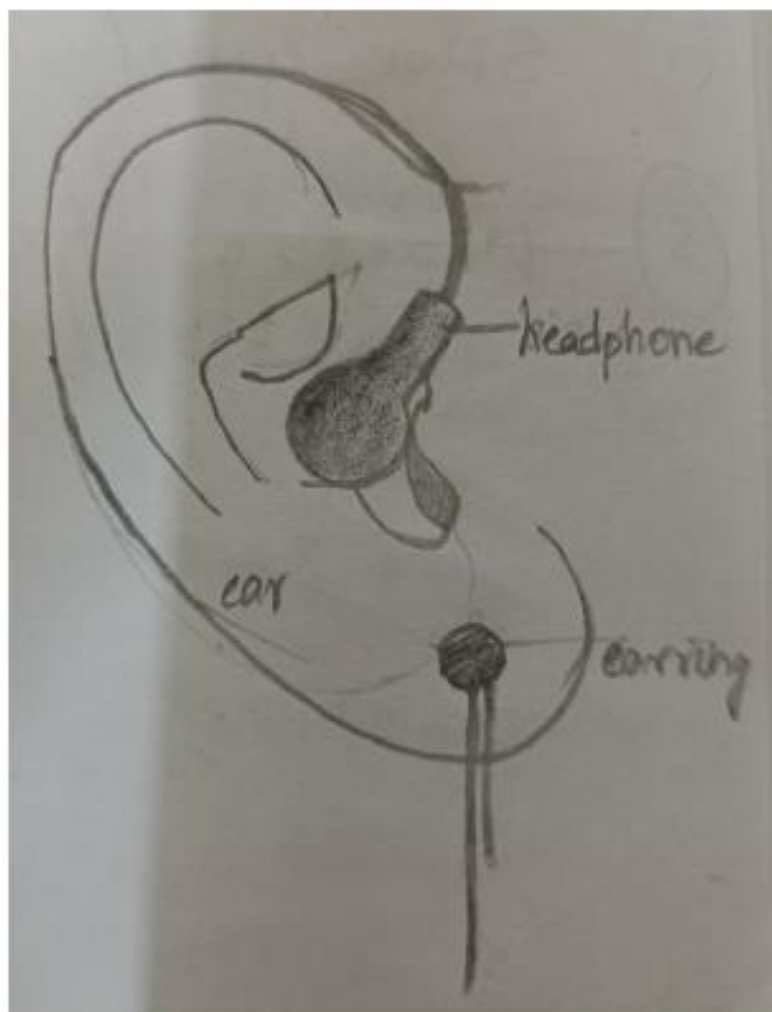
SKETCH:



) **NAME:** Headphone cum Earring

DESCRIPTION: A headphone cum earring is a unique fusion of style and functionality. A pair of earrings that not only accessorize the ears but also double as discreet headphones. This accessory blends fashion and technology satisfying those who crave both aesthetic appeal and audio convenience. The earpieces, designed to resemble stylish earrings, house miniature speakers or audio components, delivering a personalized audio experience. They could be connected effortlessly to the devices via Bluetooth, allowing to enjoy favorite tunes or take calls with a touch of sophistication.

SKETCH:



) **NAME:** Walk Fit

DESCRIPTION: Walk fit is the smart shoes that go beyond the ordinary, seamlessly blending fashion with futuristic functionality. These analyse the walking or running patterns, detect imbalances, and provide real-time feedback to improve your form and reduce the risk of injuries. Walk Fit can be useful for activities like yoga or weightlifting, offering insights into weight distribution and stability. With temperature-regulating technology, these shoes keep our feet comfortable in any weather conditions. Walk Fit not only monitor overall fitness but also analyse the gait for potential issues and mainly these can even harvest energy from the movements for sustainable power.

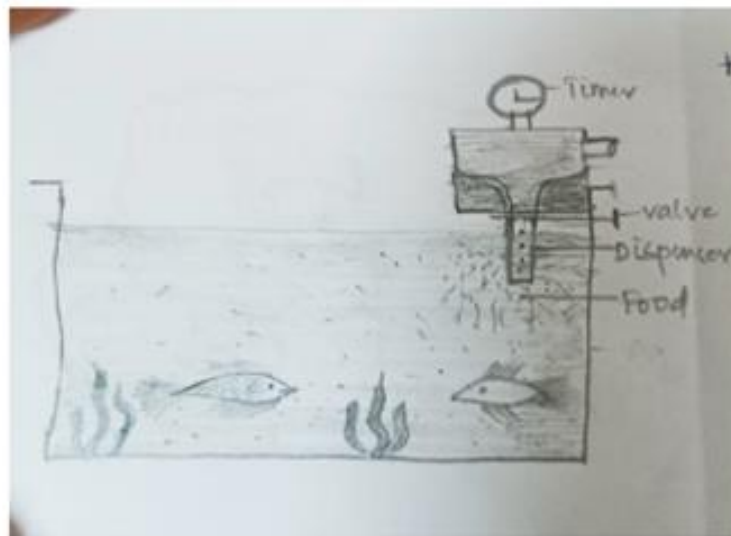
SKETCH:



NAME: Automatic Fish Food Dispenser

DESCRIPTION: An automatic fish food dispenser is a device designed to simply the task of feeding the aquatic buddies by automatically dispensing their meals at scheduled times. Typically, it consists of a container for fish food, a programmable timer, and a mechanism to release the food into the water. It is attached to one corner of the aquarium and connected to electric supply. It is useful for the professionals working whole day and night.

SKETCH:



GROUP NUMBER : 11

K. Prajwal Krishna Singh (1602-20-736-091)

Sharanya Jawalkar (1602-20-736-103)

S. Shiva Kumar (1602-20-736-104)

Parameshwar (1602-20-736-330)

Product Profile Ratings

1602-20-336-091 K. Pragna
 1602-20-336-103 J. Chavanya
 1602-20-336-104 S. Divya Kumari
 1602-20-336-330 P. Animesh

Selection Criteria	A Automatic Fish Food Dispenser 1602-20-336-091	B Face Wash Maker -103	C Headphone Cum Earring -330	D Taser Ring -091	E Stainless Table cloth -103	F Walk Fit -104
Ease of Handling	+	+	-	+	+	+
Ease of use	+	+ (-)	+	+	+	+
Readability of settings	+	0	+	+	+	+
Dose metering accuracy	0	0	0	0	0	0
Durability	-	-	+	+	+	+
Ease of manufacture	+	-	-	+	-	0
Portability	0	-	+	+	0	+
Sum +'s	(4)	(1)	(4)	(6)	(4)	(5)
Sum 0's	(2)	(3)	(1)	(1)	(2)	(2)
Sum -'s	(1)	(3)	(2)	(0)	(1)	(0)
Net Score	(3)	(-2)	(2)	(6)	(3)	(5)
Rank	(3)	(5)	(4)	(1)	(3)	(2)
Continue?	yes.	NO	Combine	yes	yes	yes

Taser Ring

Product Name:

Sl. No	Factor	(5) Very High	(4) High	(3) Medium	(2) Low	(1) Very Low
1	Utility					
2	Need	✓		✓		
3	Sales Appeal			✓		
4	Advantages and Improvements			✓		
5	Size of Market			✓		
6	Patentability			✓		
7	Research and Development Cost				✓	
8	Setup and tool cost advantage				✓	
9	Profit Potential					
10	Suitability of Engineering and facilities	✓				
11	Suitability of sales and distribution	✓		✓		
12	Strength of company compared		✓			
13	Expected product life	✓				
14	Product compatibility	✓				

$$(20) + (0) + (18) + (6) = (44)$$

This learning method helped the students to understand the various sources of idea generation, brain storming process, listing and screening of new product ideas. The next step would be developing clear project proposal and design specifications. This may encourage them on the path of developing a new product and creating a startup idea.

Experiential learning

Students learned through direct experience and reflection, gaining practical skills and knowledge by actually involving in hand on practice.





