



Универзитет Св. "Кирил и Методиј"  
Машински факултет - Скопје



Одбрани проекти по предметот:

# **ПРОИЗВОДИ ОД ПЛАСТИКА**

Учебна година:

2020-2021

Предметен наставник: Вонр. проф. д-р. Иле Мирчески

Студент тутор: Димитриј Георгиевски

Проект бр. 1:

Изработка на калапно гнездо

# CORE & CAVITY DESIGN

Plastic Injection Modeling



**BATHROOM SHELF**



**POPPING CHAMBER**



# CORE AND CAVITY MOLD DESIGN

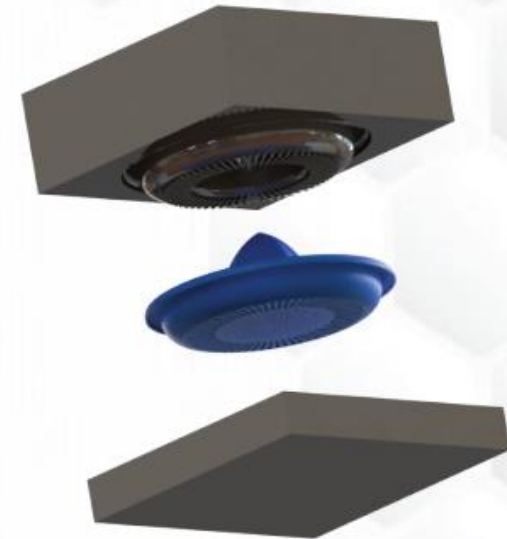
Lemon squeezer



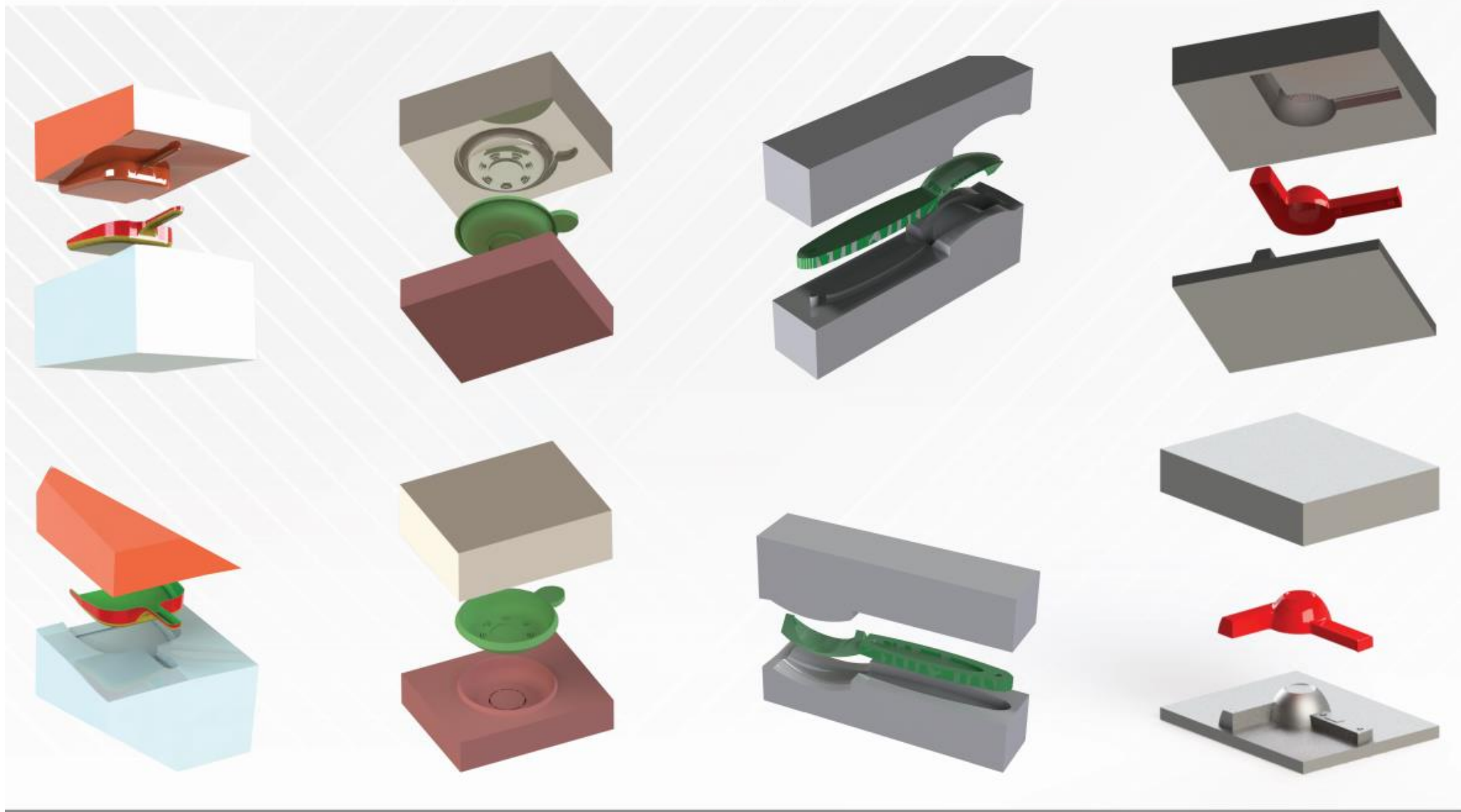
Toy-excavator cab



Lemon squeezer



# Core and cavity mold design





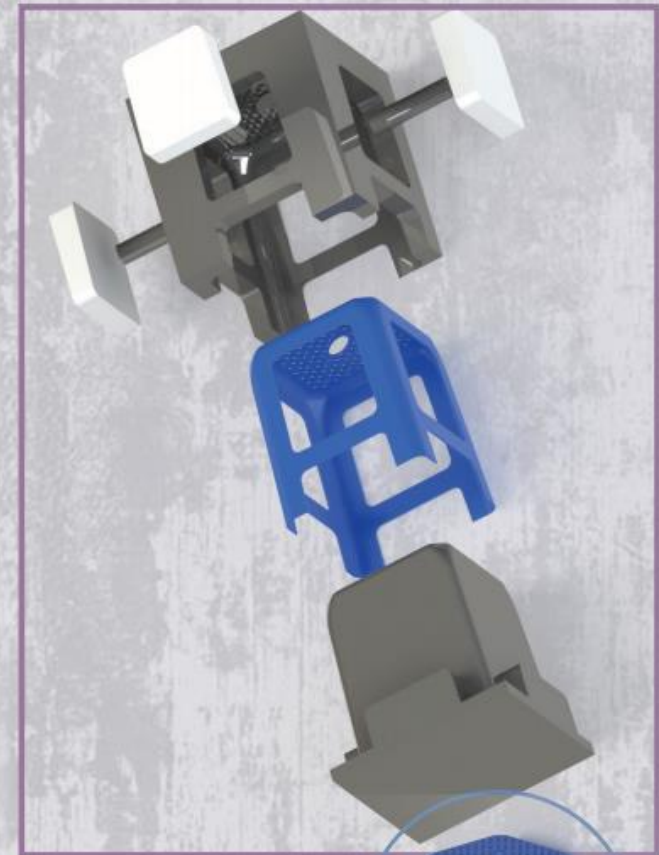
# CORE AND CAVITY DESIGNS



TOY PART



WATERING  
CAN



CHAIR



# CORE AND CAVITY

## Plastic mold design



"Ss. Cyril and Methodius" University  
Faculty of Mechanical Engineering  
Industrial Design, Ergonomics and Applications Lab



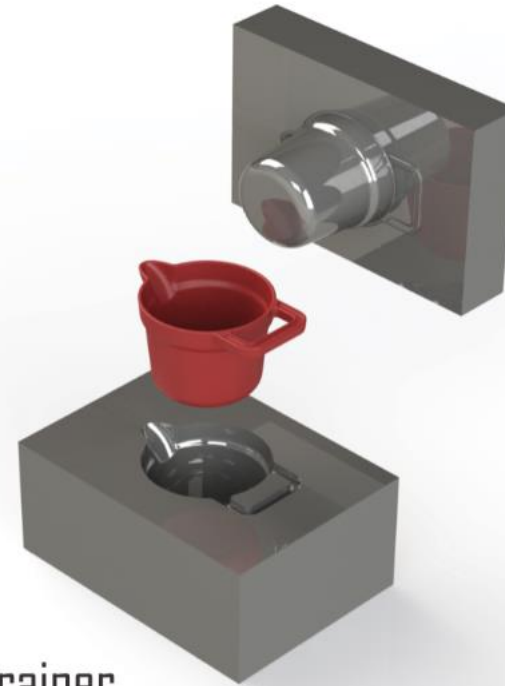
Students: Kristina Racikjevikj2413  
Angela Aleksova2386  
Kostadina Todorovska 2384  
Course: Design with Plastics  
Leader: Prof. Dr. Ilie Mirceski  
School Year: 2020/2021

# CORE AND CAVITY DESIGN

## Plastic mold



Hair dryer



Strainer

"Ss.Cyril and Methodius" University  
Faculty of Mechanical Engineering  
Industrial Design, Ergonomics and Application Lab



Skopje 2020

Student: Renata Arsova, Filip Kostencovski  
Course: Design with Plastics  
Leader: Prof. Dr. Ilie Mircheski  
School year: 2020/2021



## CORE AND CAVITY DESIGN



remote control

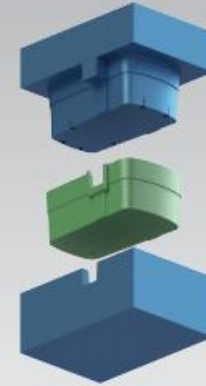
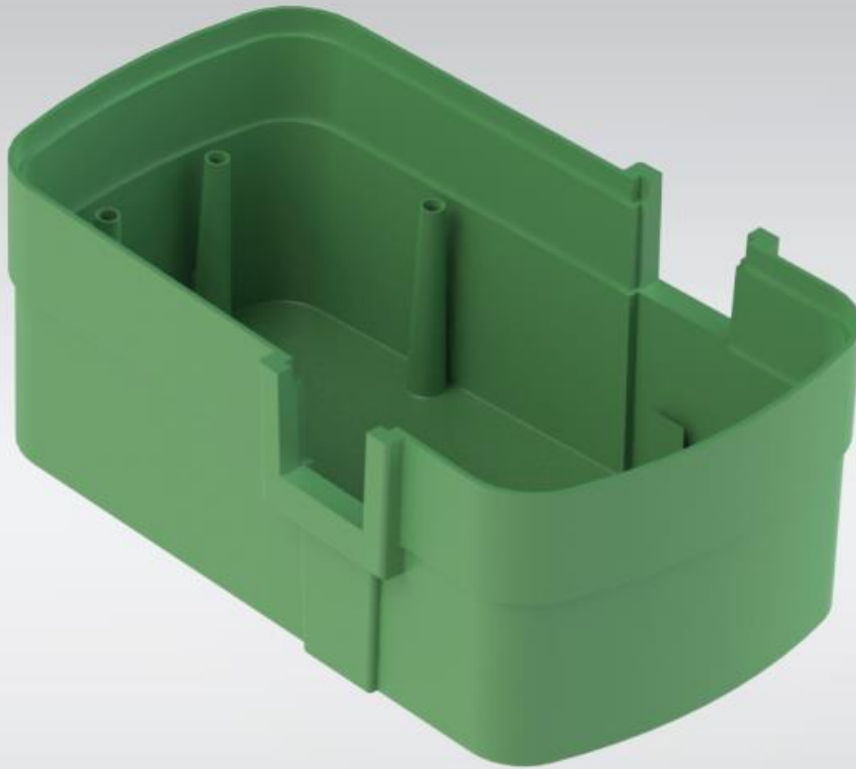


hair dryer

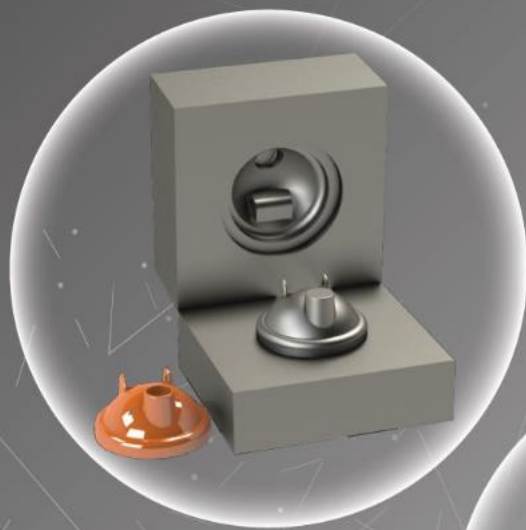


# CORE AND CAVITY MOLD DESIGN

bosch battery pack



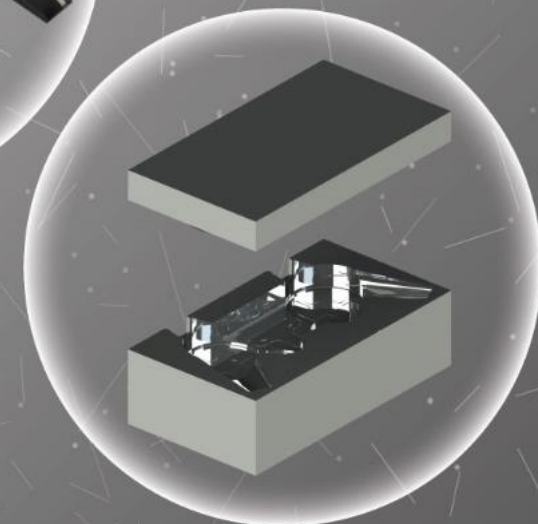
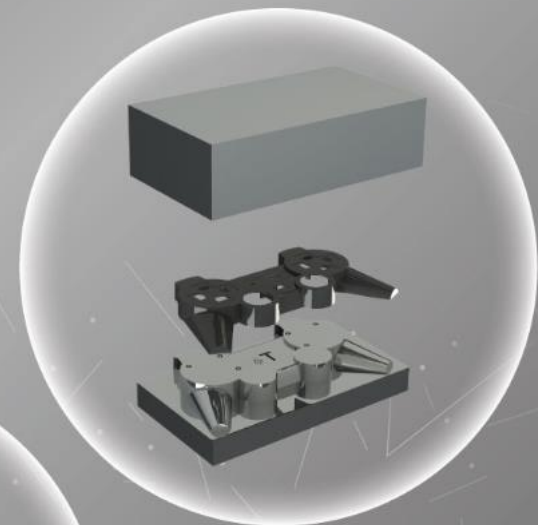
# CORE AND CAVITY MOLD DESIGN



SHAKER CAP

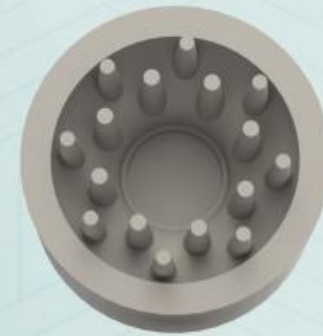
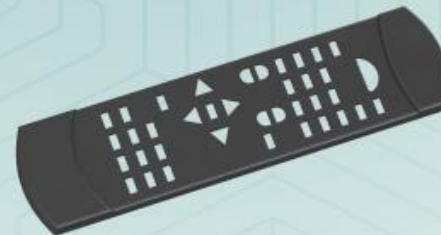


JOYSTICK





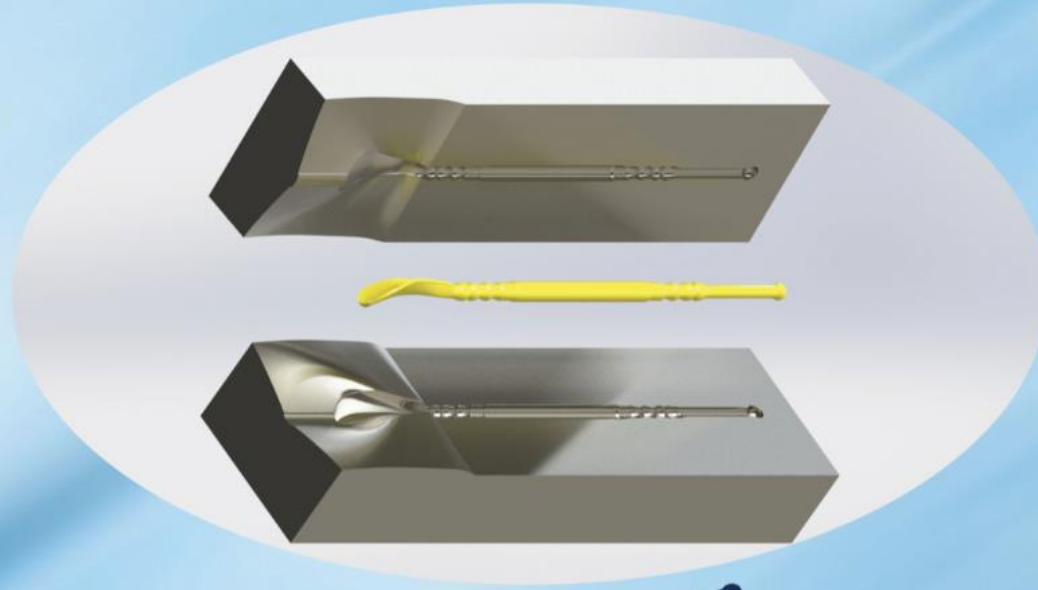
# Core and cavity mold design



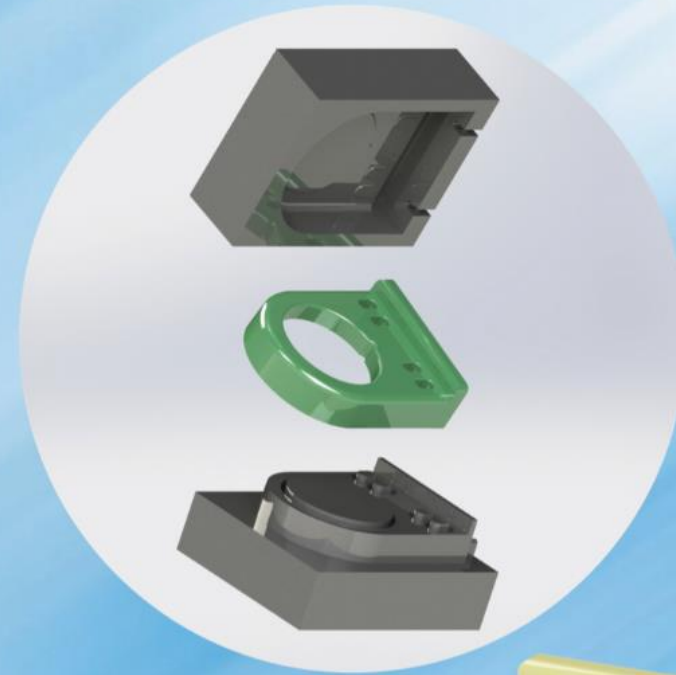


# CORE AND CAVITY DESIGN

## Plastic Injection Molding



**PLASTIC  
SHOEHORN**



**TOOTHBRUSH  
HOLDER**



# CORE & CAVITY DESIGN

## PLASTIC INJECTION MODELING



### BOTTOM PART OF A MOUSE

Design is a visual look or a shape given to a certain object, in order to make it more attractive, make it more comfortable or to improve another characteristic.

# Цедалка Цедалка за лимон



**Направете вкусни и освежителни пијалоци за  
вас и најблиските**



**ЛЕСЕН ЗА КОРИСТЕЊЕ И ЕДНОСТАВЕН ЗА МИЕЊЕ.  
ЦЕДАЛКАТА СЕ СОСТОИ ОД САМО 3 ДЕЛА**



# Проект бр. 2: Општа тема



# Coffee Machine

*for all the coffee lovers out there*



*With this machine prepare a rich, full-bodied cup of espresso with the utmost simplicity or use the innovative Pannarello steam wand to froth milk to create creamy cappuccino and latte.*

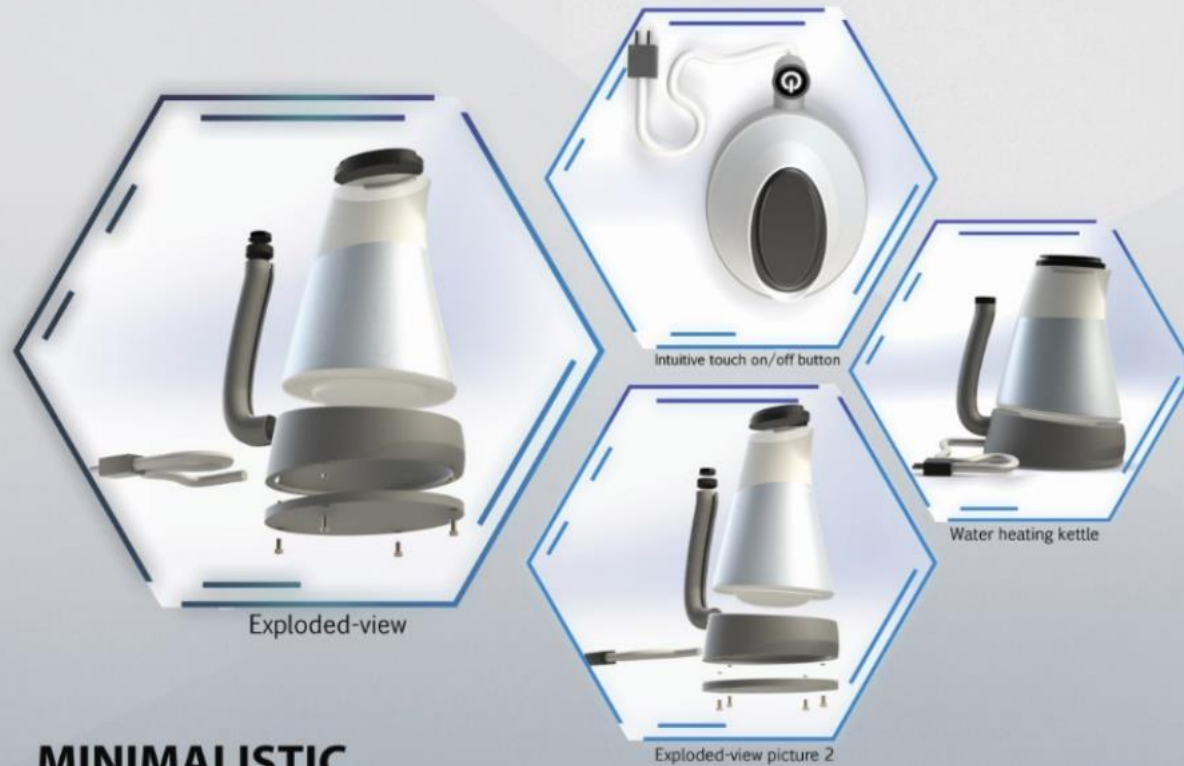


- ✓ *elegant and modern design*
- ✓ *easy to use*
- ✓ *exceptional versatility*

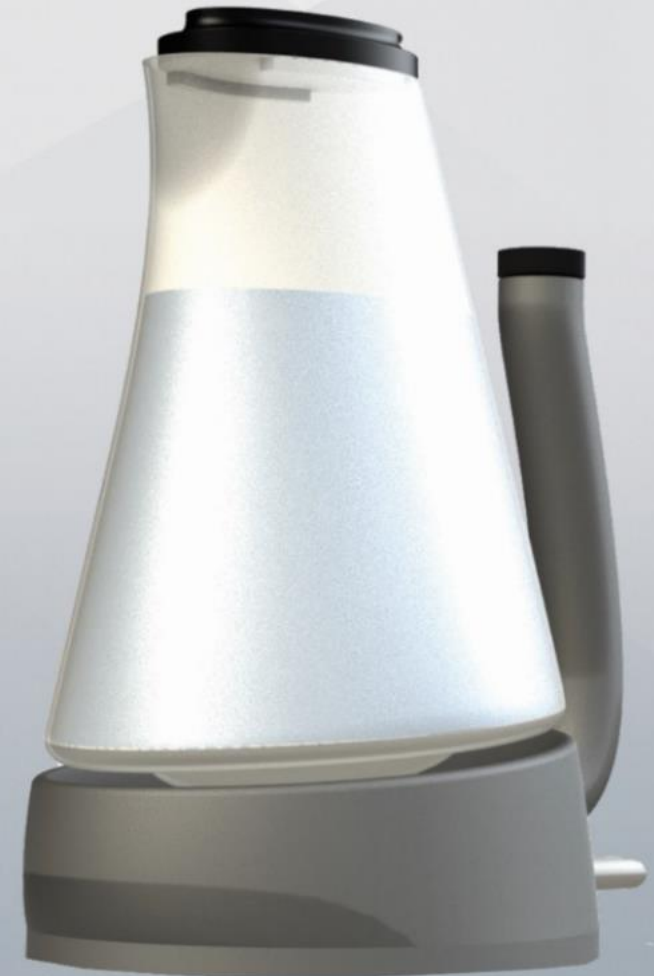


# WATER HEATING KETTLE

Cooking utensil which is used most often to boil water for beverages made with additional ingredients that are best prepared with boiling water.



**MINIMALISTIC  
MODERN &  
ERGONOMIC DESIGN  
INTUITIVE TOUCH BUTTON  
EASY TO USE**





# FILTER COFFEE ANYTIME IT'S TIME FOR COFFEE!

EASY TO USE!

Disassembled



Sieve



Interface



Push the button to start

Left light  
- Start

Center light  
- Temperature

Left light  
- Finish



Do you want fresh filtered coffee?  
You can have it with this device.  
All you have to do is just to add  
water and coffee in the filter.  
This coffee machine is for  
household usage.



# THE EYE



## FRUIT POWER JUICER



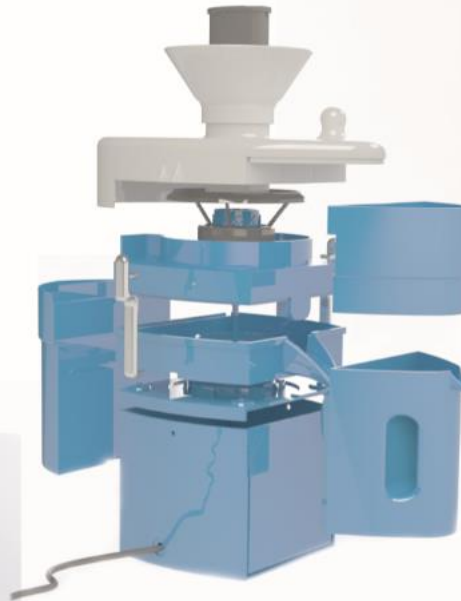
**200W POWER**



**EASY WASHABLE**



**HIGH ROTATIONAL SPEED**



**13 PARTS  
COMBINED TOGETHER**

**THE JUICER HAS A  
CAPACITY OF 0.8 LITRES.  
IT'S DESIGNED TO BE  
SAFE FOR EVERY USER.**



**TWO WORKING  
SPEEDS**

**THE IDEA OF THIS CONCEPT JUICER  
IS TO BE FAST, EFFICIENT,  
SAFE AND EASY TO USE.**





# DARBLE CHAIR

MODERN CHAIR MADE OF PLASTIC AND STAINLESS STEEL



HIGH GLOSS  
PLASTIC



MEDIUM GLOSS  
PLASTIC



LOW GLOSS  
PLASTIC

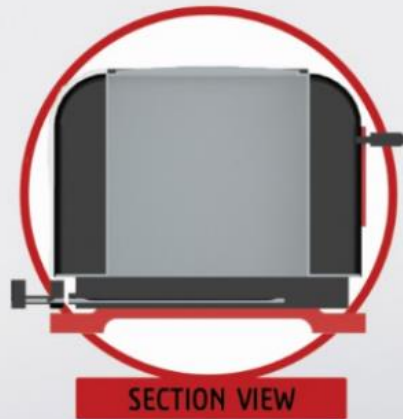
"SS. CYRIL AND METHODIUS" UNIVERSITY  
FACULTY OF MECHANICAL ENGINEERING  
INDUSTRIAL DESIGN, ERGONOMICS AND APPLICATIONS LAB



STUDENT: ANGELA ALEKSOVA  
COURSE: PLASTIC PRODUCT DESIGN  
LEADER: PROF. DR. ILE MIRCHESKI  
SCHOOL YEAR: 2020/2021

# LADYBUG<sup>®</sup>

## TOASTER



A TOASTER TO MAKE YOUT DAILY LIFE MORE COLORFUL

# HOME CINEMA PROJECTOR

PRIMITIVE FORMS PROJECTOR WHO WILL BRINGS THE  
CINEMA AT YOUR HOME



FUNCTIONAL



ROTATING



SMALL



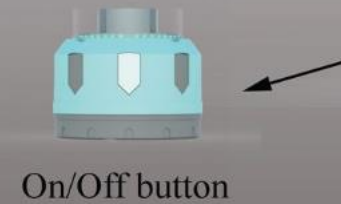
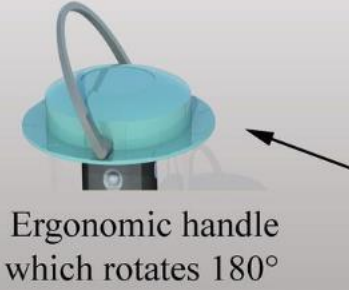
BATTERY CHARGED

PORTABLE



# Led lamp

Light up the darkness



Innovation is about transforming the  
familiar into the extraordinary

Inspired from Blobject's & Origami's playfulness





# SHARPY BALL

ELECTRIC KNIVES SHARPENER



- ›ATTRACTIVE
- ›ECONOMICAL
- ›EFFICIENT
- ›EASY TO USE
- ›SAFE AND STABLE



TOP VIEW

SIDE VIEW

EXPLODED VIEW

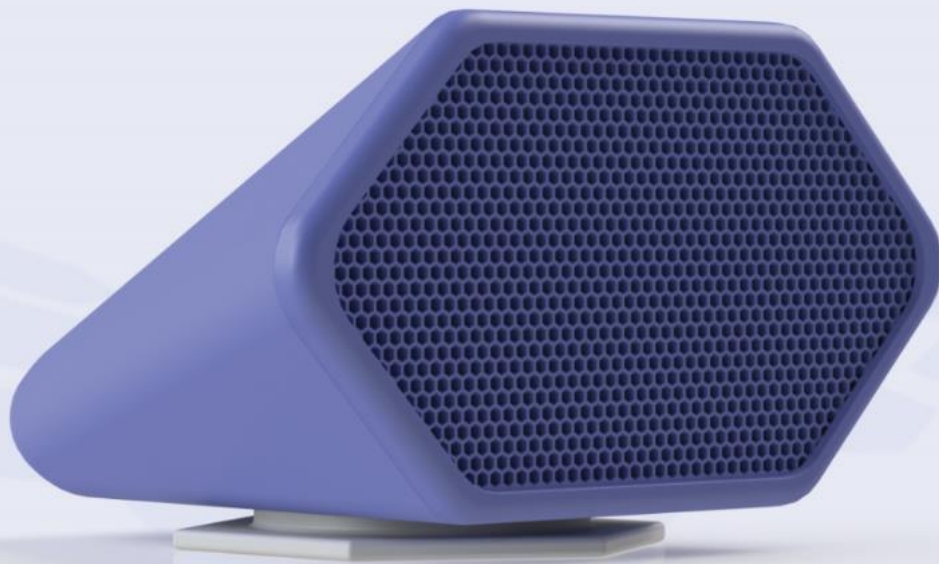
EXPLODED VIEW

SHARPY BALL IS ELECTRIC KNIVES SHARPENER  
FOR EASY AND PRECISELY SHARPENING OF KITCHEN KNIVES.  
IT IS EVERYDAY KITCHEN APPLIANCE FOR ANYONE WITH  
A PASSION FOR COOKING.



# HEXO

small hexagonal bluetooth speaker

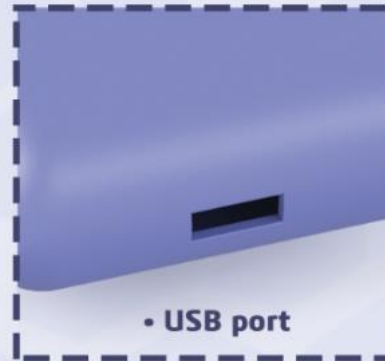


Waterproof Speakerphone Long battery life

• Auto - power off



• USB port



• Exploded view

HEXO is a very unique hexagonal bluetooth speaker which allows you to enjoy music at any occasion, anytime. Its small and compact for transportation, you can take it wherever you want with you. Let the sounds you love fill the room you live in.

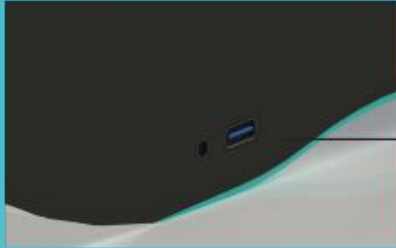


# Papillon

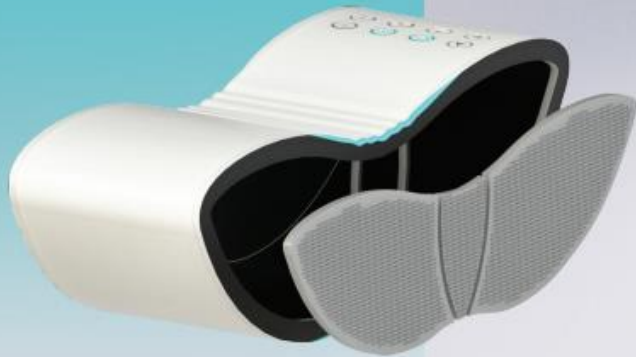
led bluetooth speaker



On off button  
Bluetooth  
Ambient light button  
Volume buttons  
Play buttons



Audio cable Input  
USB Type C device  
charging





# BLUCTAGON

adjustable headphones



**16H BATTERY LIFE**



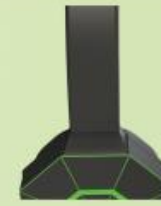
**LIGHTWEIGHT,  
COMFORTABLE DESIGN**



**MULTI-POINT  
CONNECTIONS**



*ROTATION*



*ADJUSTMENT*



*LED LIGHTS*



*EASY AND EFFECTIVE FOLDING*

Bluctagon are headphones for those who love to make music come to life. Its design and the ability to adapt makes them suitable for all users.





# THE LIGHTNING BOLT

*Let the lights guide you*

*Everything looks better from the inside  
of a motorcycle helmet*

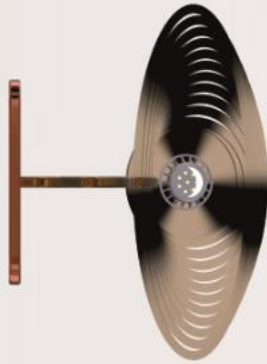


⚡ Safe  
⚡ Trendy  
⚡ Affordable

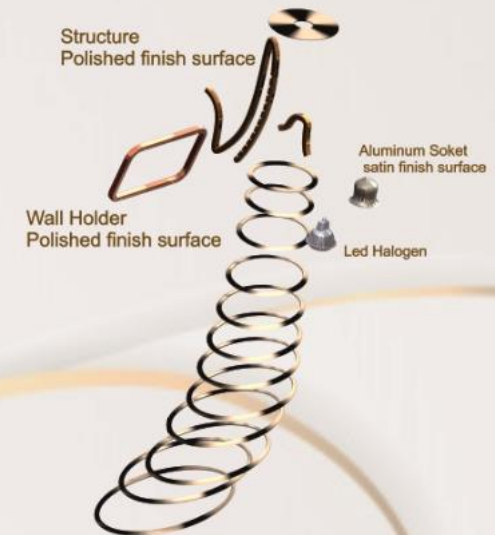


# Minimalistic Elegant Wall lamp

Luxury design adopts  
minimalistic forms and elegant  
shapes inspired by curve shaped structure



A World of design!!  
A pure example of modern  
technology and standards  
inspired by elegant simplicity mixed  
with chaos.



Structure  
Polished finish surface

Wall Holder  
Polished finish surface

Aluminum Socket  
satin finish surface

Led Halogen

Elliptical shapes from recyclable acrylic glass



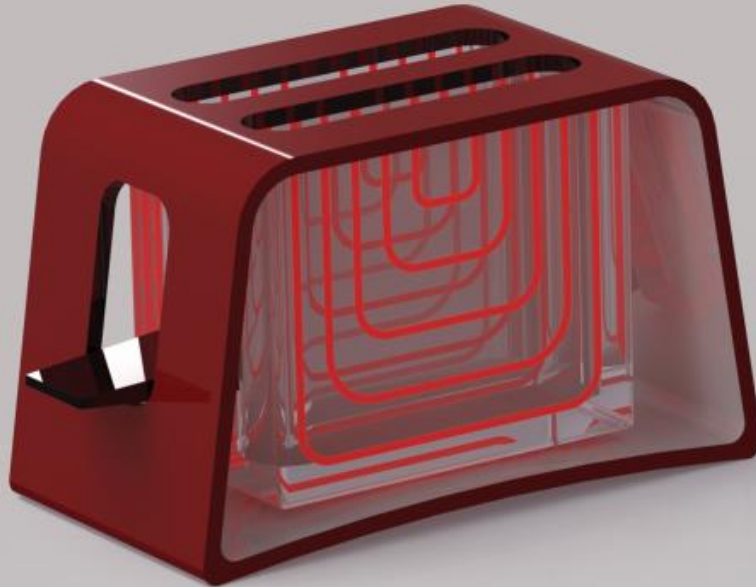
## Concepts



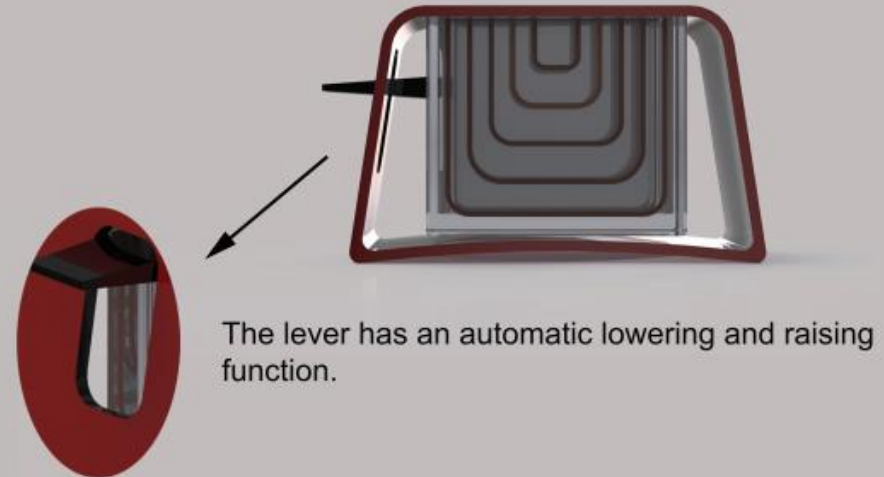


# TOASTER

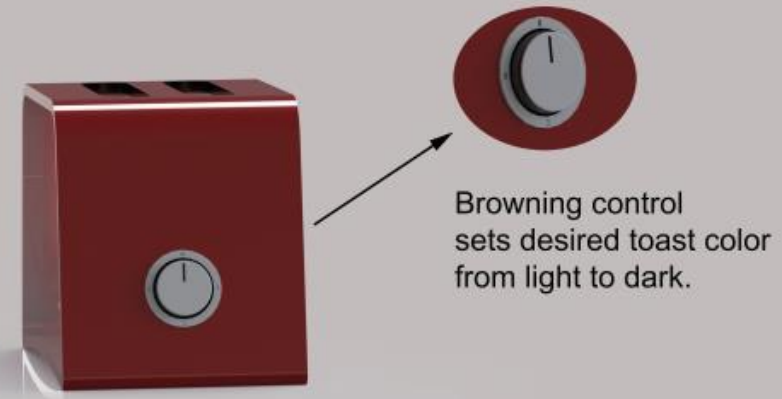
Do you want delicious bread slices?



It's transparent toaster for two bread slices that allows you to see the toasting process.  
The product is designed in Spatial Reinterpretation.



The lever has an automatic lowering and raising function.



Browning control sets desired toast color from light to dark.



# Vegetable/fruit chopper



- Electricity powered
- Can be used at home or restaurants
- Easy to chop (just plug it in)
- There's a measurer for the weight of the products you place



*Visual display for the weight of the products*



*Knob for adjusting the speed of the chopper*

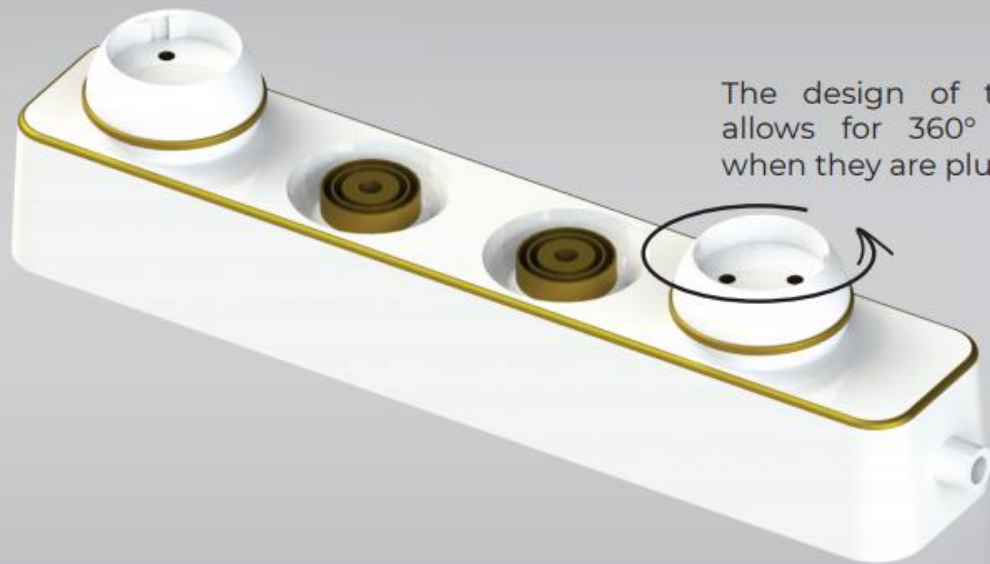




# SPHEROCORD

freedom through rotation

A redesign of the standard and boring extension cord into a unique design.



The design of the spheres allows for 360° of rotation when they are plugged in

When not in use, the spherical outlets can be removed for safety.



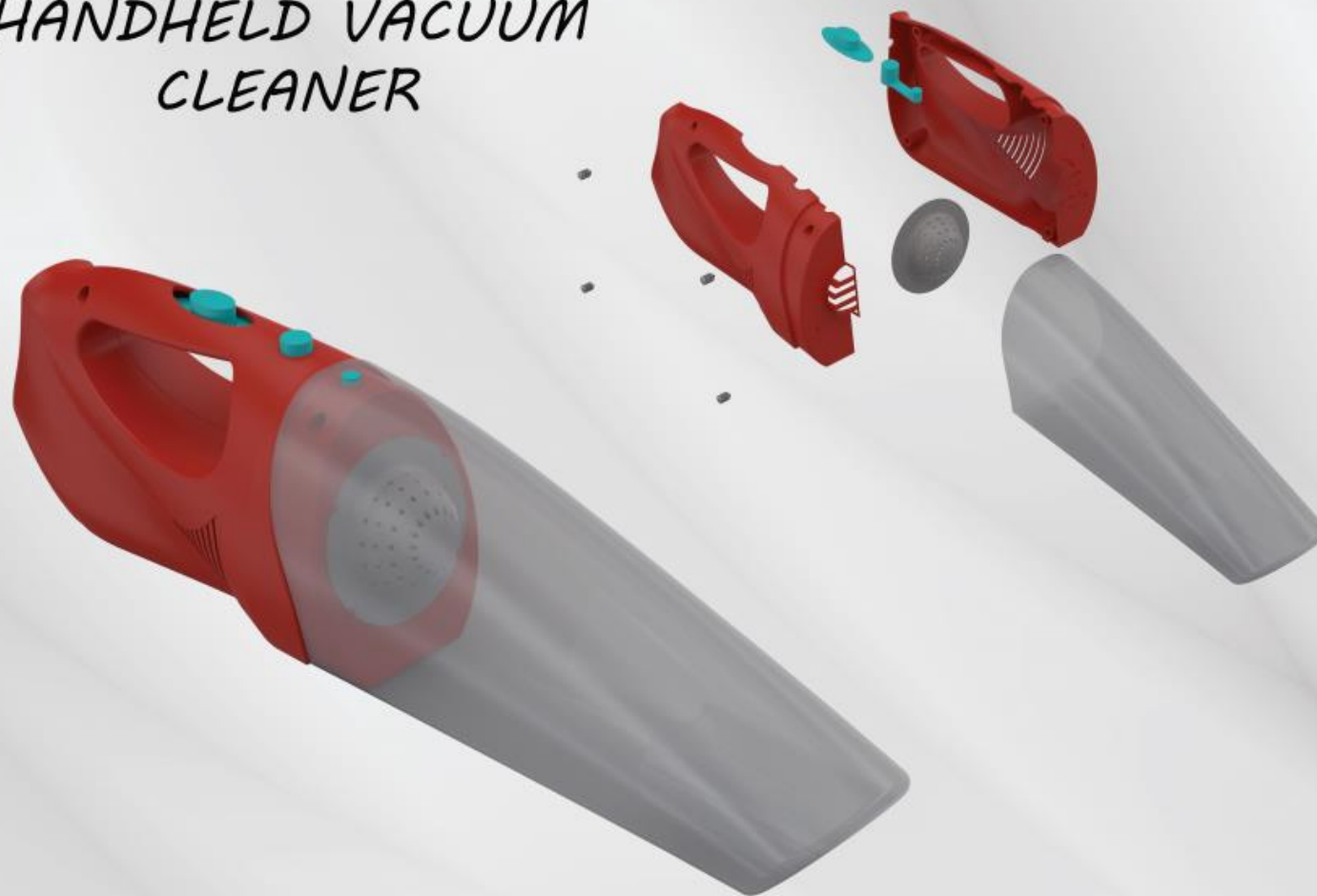
"Ss. Cyril and Methodius" University  
Faculty of Mechanical Engineering  
Industrial design, Ergonomics and Applications Lab



Skopje, 2021

Student: Marko Talevski 1738  
Course: Design with Plastics  
Leader: Prof. D-r Ile Mircheski  
School Year: 2020/2021

# HANDHELD VACUUM CLEANER



1. Handle attachment for people suffering from Parkinson's disease which can be clamped onto the handle of the vacuum cleaner.
  2. Handle attachment for elderly people or people who can't bend over which can be clamped onto the handle of the vacuum cleaner.
  3. A brush for easier use of the device.
- The transparent waste collector can be manually removed with minimum efforts by pressing the cylindrical button on the top of the vacuum cleaner allowing cleaning or removing of the filter from the device.
  - The vacuum cleaner is battery operated. The battery is rechargeable.
  - There's an on/off switch on the top of the handle of the device.

1.



2.



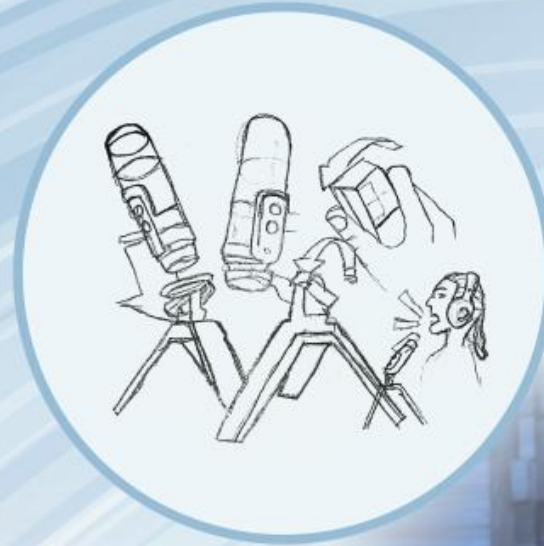
3.





# Magical voice 🎵

*The professional experience*



## You have a nice singing voice?

-Now you don't need to pay a lot of money to rent a studio.  
With this magical microphone you can turn any place into a studio.

-It is made of high quality plastic.  
-You can adjust it according to your height.

•And it has two supports, one used in a sitting position,  
the other one in a standing position.



# COFFEE MACHINE

It's time for coffee!



## Do you want coffee?

Now it's fast, easy and efficient!

**First step:** Turn the front knob to the desired heat of the coffee.

**Second step:** Press one of the two buttons. (Do you want long or short coffee?)

And...

In just a few minutes you get the desired coffee.

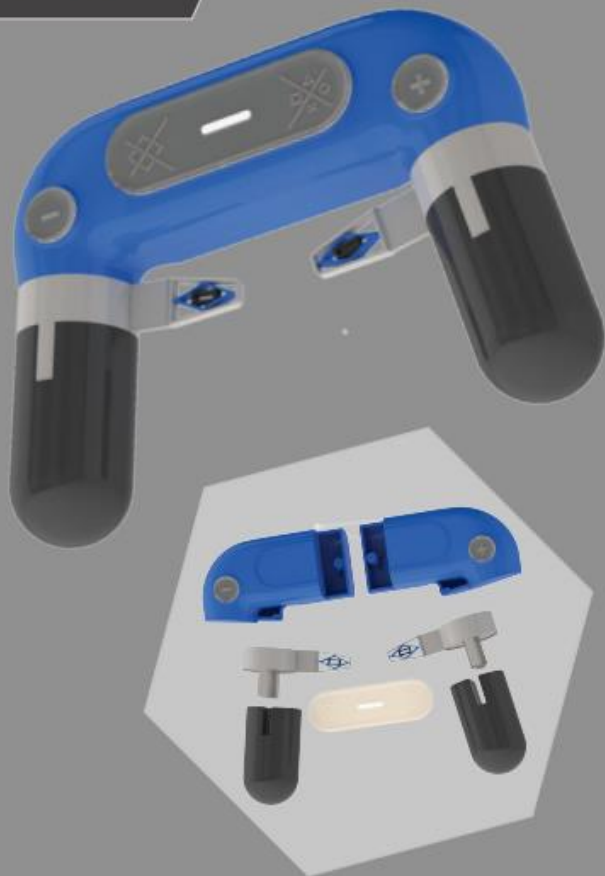




# MODLTER

## MODULAR GAME CONTROLLER

GAME



FIRE

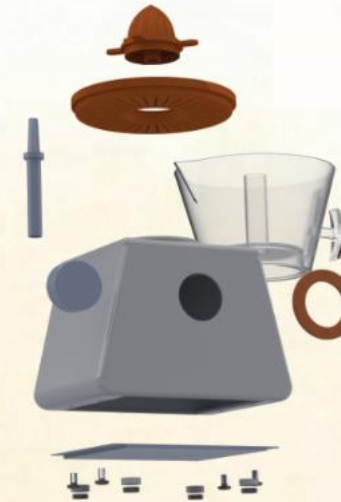


A HIGHLY ADAPTABLE GAMING CONTROLLER  
FOR THE ULTIMATE GAMING EXPERIENCES.  
THIS CONTROLLER HAS TWO PLAYING  
MODES. THE MAIN GAME FORM AND  
SECOND FIRE FORM.

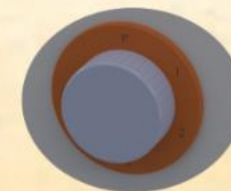


# ELECTRIC CITRUS JUICER

It's time for fresh orange juice for whole family  
"Natural orange juice a day keeps the doctor away"



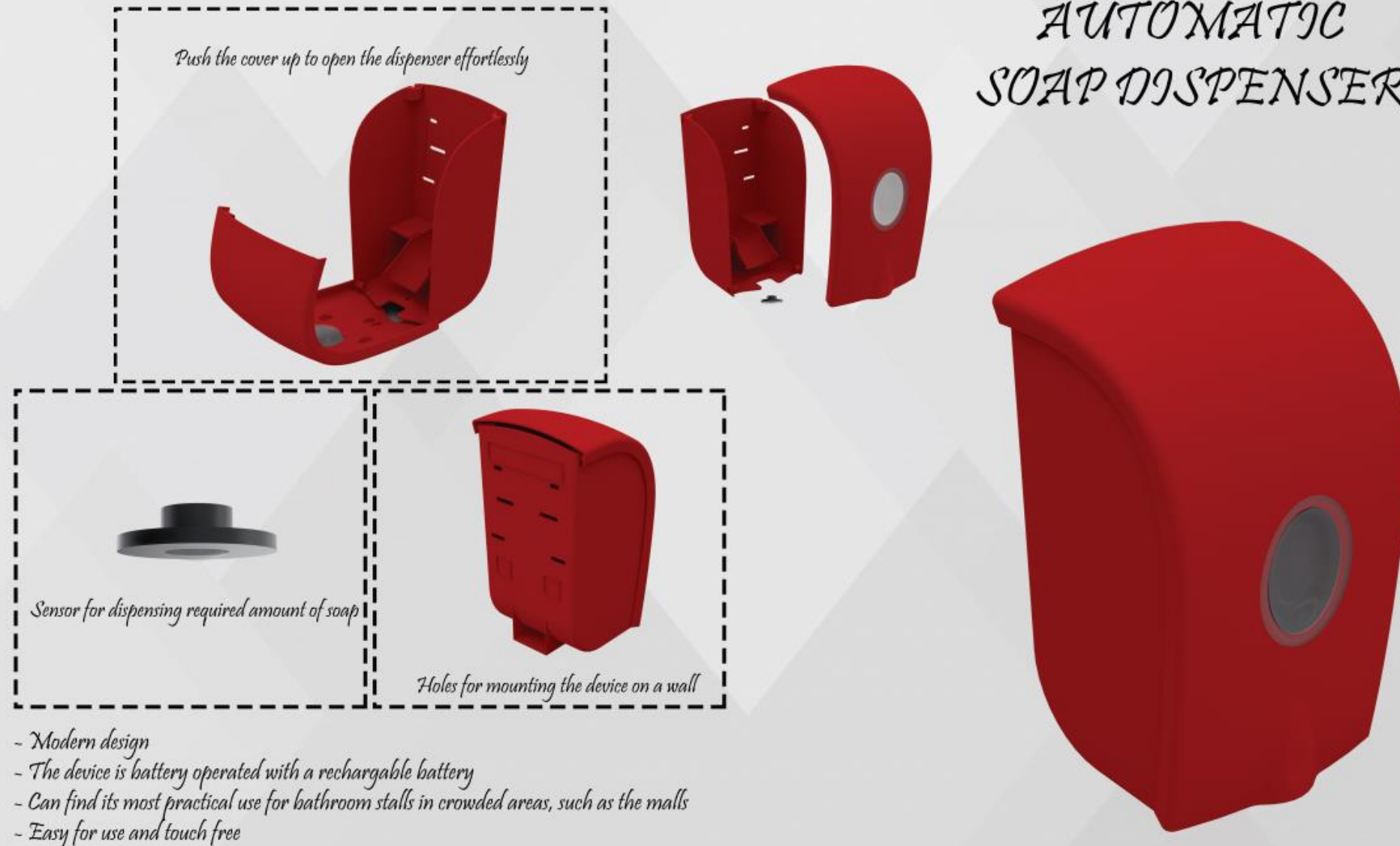
1. Modern design
2. Easy to use
3. Easy disassembly and cleaning
4. Three adjustment speeds



Speed adjustment button



# AUTOMATIC SOAP DISPENSER



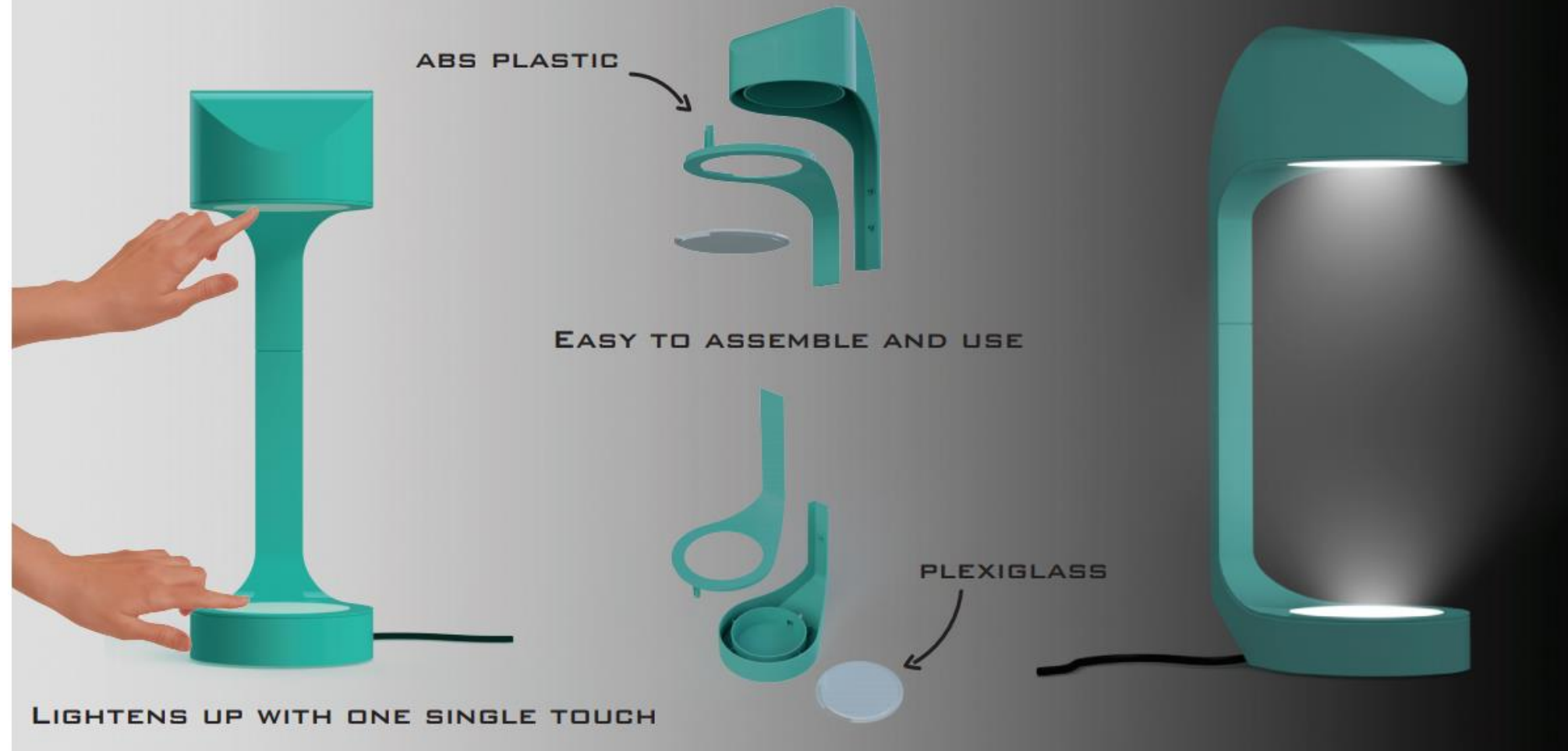
- Modern design
- The device is battery operated with a rechargeable battery
- Can find its most practical use for bathroom stalls in crowded areas, such as the malls
- Easy for use and touch free





# SENSITIVE TOUCH LAMP

DOUBLE LIGHTS FOR BETTER VISIBILITY



LIGHTENS UP WITH ONE SINGLE TOUCH

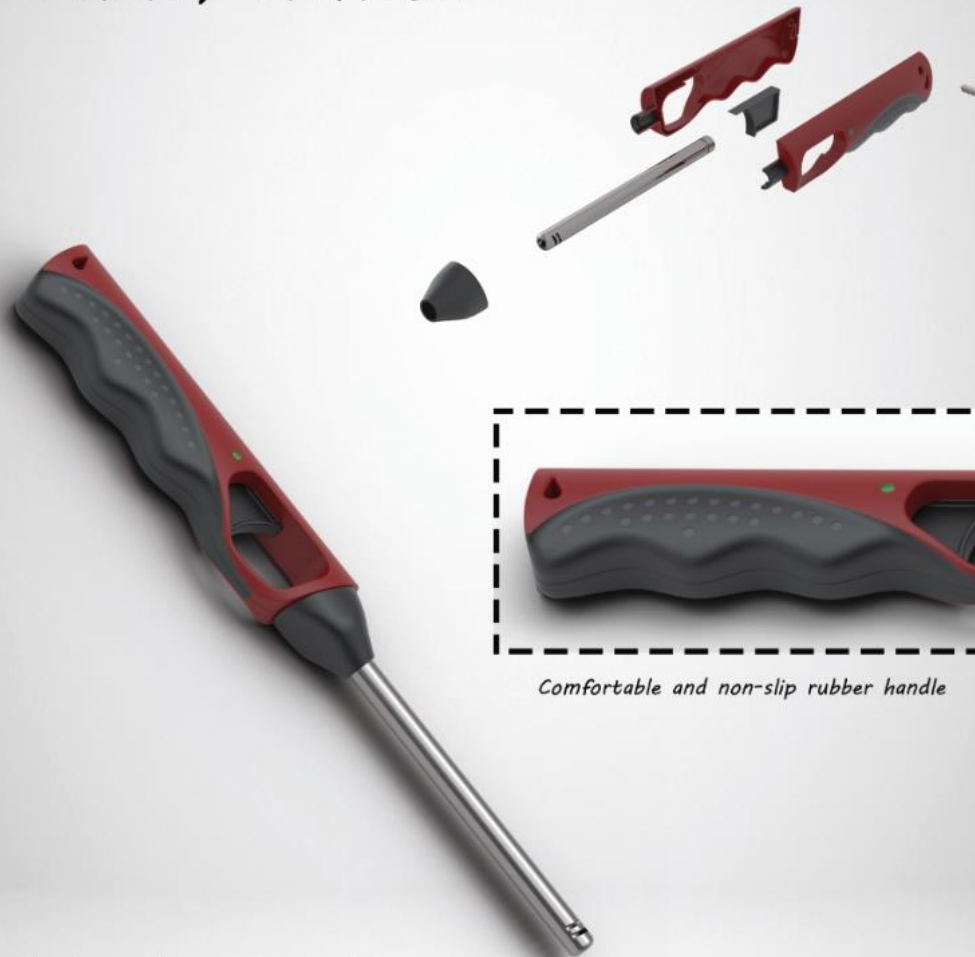
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Student: Filip Kostencovski  
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# UTILITY LIGHTER



*Comfortable and non-slip rubber handle*

*This long reach neck lighter can light your joyful fireworks, peaceful candles, outdoor grill and much more while ensuring the fun and safety of your friends and family*



# BLENDERGO

Multifunctional hand blender



SHRED



WHISK



BLEND

Six speed



Power button  
Turbo button



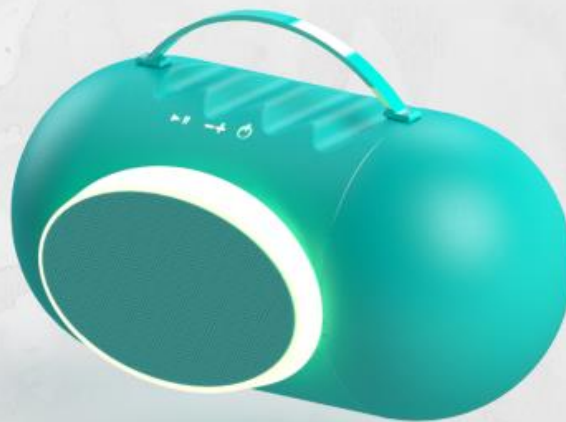
- Elegant design, ergonomic handle
- Body material - Plastic (PS)
- Blade material - Stainless Steel



# FLOW

PORTABLE WIRELESS SPEAKER

THE FLOW SPEAKER  
PLAYS LOUDER  
THAN ITS  
DIMINUTIVE SOUND  
SUGGESTS AND IT  
OFFERS A LIGHT  
SHOW THAT  
ACTUALLY REACTS  
TO YOUR MUSIC.  
IT HAS EXCELLENT  
AUDIO  
PERFORMANCE WITH  
BALANCED SOUND  
AND IT LASTS  
INCREDIBLE 20+  
HOURS OF PLAYTIME  
AT MEDIUM VOLUME.



✓ Attractive design



✓ Powerful bass depth



✓ Impressive LED lights





# the DETERGREEN

simple and ergonomic design for a  
laundry detergent product  
PET bottle made of recycled plastic  
eco-friendly



1



2



3

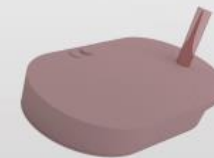


# Rose" Desk Lamp

Simple. Light. Elegant.



Turn on/ off button



Your to-dos become ta-das. Shine a light on your daily task list with this stylish desk lamp. It sure puts a modern touch in any room.

You can easily control this table lamp from your favorite armchair which provides a functional directed light.

