

Idea Lab: Portable Charger for cellphones

Submitted By

Kartik Bhalla (14BCE046)



**COMPUTER ENGINEERING
INSTITUTE OF TECHNOLOGY
NIRMA UNIVERSITY
AHMEDABAD-382481**

JULY - 2017

Idea Lab: Portable Charger for cellphones

Idea Lab Project

Submitted By

Kartik Bhalla (14BCE046)

Under the mentorship of

Prof Ajay Patel



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Declaration

We do hereby declare that the technical project report submitted is original, and is the outcome of the independent investigations/research carried out by us and contains no plagiarism. The research is leading to the discovery of new facts/techniques/correlation of scientific facts already known. This work has not been submitted to or supported by any other University or funding agency.

We do hereby further declare that the text, diagrams or any other material taken from other sources (including but not limited to books, journals and web) have been acknowledged, referred and cited to the best of our knowledge and understanding.

Date: 29 July, 2017

Place: Ahmedabad

NIRMA UNIVERSITY
INSTITUTE OF TECHNOLOGY
IDEA LAB
COMPUTER ENGINEERING

Final Report of the work done on the Idea Lab Project.

1. Idea Lab Project ID: IDEA-2016-CE-01
2. Project Title: Portable Charger for cellphones
3. Period of Project: August 2016 to July 2017

4. (a) Name of Student (Roll No.): Kartik Bhalla (14bce046)
Department: Computer Engineering
Name of Mentor: Prof Ajay Patel

5. Project Start Date: August 2016
6. (a) Total Amount Approved: Rs. 10000/- (b) Total Expenditure: NIL

(b) Report of the work done:

- i. Brief objective of the project: Brief objective of the project
To make a portable charger with
mechanical power charging

Results achieved: Yes, The project has been prepared.

Signature of Student
Kartik Bhalla
(14bce046)

Signature of Mentor
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Assistant Professor,
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Dr. Ankit Thakkar
Idea Lab Co-ordinator,
Institute of Technology,
Nirma University,
Ahmedabad

Signature of Director
Dr. Alka Mahajan
Director,
Institute of Technology,
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1.1 Introduction

- A portable charger which can charge laptops, trending mobile phones.

1.2 Literature Survey

- The main problem which arises with portable charges is the power loss and shorter charging durations.
- The project focuses on making the portable charger more portable than ever.

(1) Project description :

The project carries an innovative idea of charging a portable charger through the means of mechanical power and using it in rural areas where there is a scarcity of electrical supply.

(2) Scope of the project

The project carries good scope in the market. It can be used by people who own a smartphone, tablet or any other device for that matter.

(3) Application area

The project is applicable to people who are associated with rural and remote areas. People who travel a lot are also a stakeholder in this project.

(4) Outcomes expected

It is expected that the project yields good and comes to use in day to day life.

1.3 Major Objectives Proposed

- The idea is to put a functioning dynamo in a portable charger.
- This would allow the user to charge the portable charger by rotating the rotating handle of the charger.
- Thus this makes no use of electricity in the charging the product.

1.4 Objectives Achieved

- Successful in designing a portable charger which can charge devices.

1.5 Budget Analysis

1. Budget Sanctioned: 10,000/-
2. Budget Utilized: NIL

1.6 Conclusion and Future Work

Hence we conclude to make a charger which is in compliance with the above stated clauses. The charger can be used in real time situations and the further scope of the project is to expand the current capacity of the charger: 5V/1A to a greater value so that it can charge bigger devices such as Laptops.

Bibliography

<https://en.wikipedia.org/>

<https://www.electricalengineeringschools.org/engineer-resources>

<https://www.allaboutcircuits.com>

ANNEXURE

1

Photograph of the Project

