

EE 1st Projects – 2nd semester – spring 2016 Project 02 Noise detector

| # | Student ID | Student Name | Grade (10) |
|----------------------|------------|--------------|---------------|
| 1 (bread bard) | | | |
| 2 (PCB) | | | |

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|---------------|--|
| Delivery Date | |
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| <p>١. يتم تسليم المشروع على bread board خلال أسبوع من نشرة ٢. يتم تسليم المشروع على PCB بعد أسبوعين من نشرة ٣. كل طالب يقوم بتسليم مشروع منفصل ٤. غير مسموح بالتأخير في تسليم المشاريع منعا لتداخل المشاريع و تراكمها</p> |
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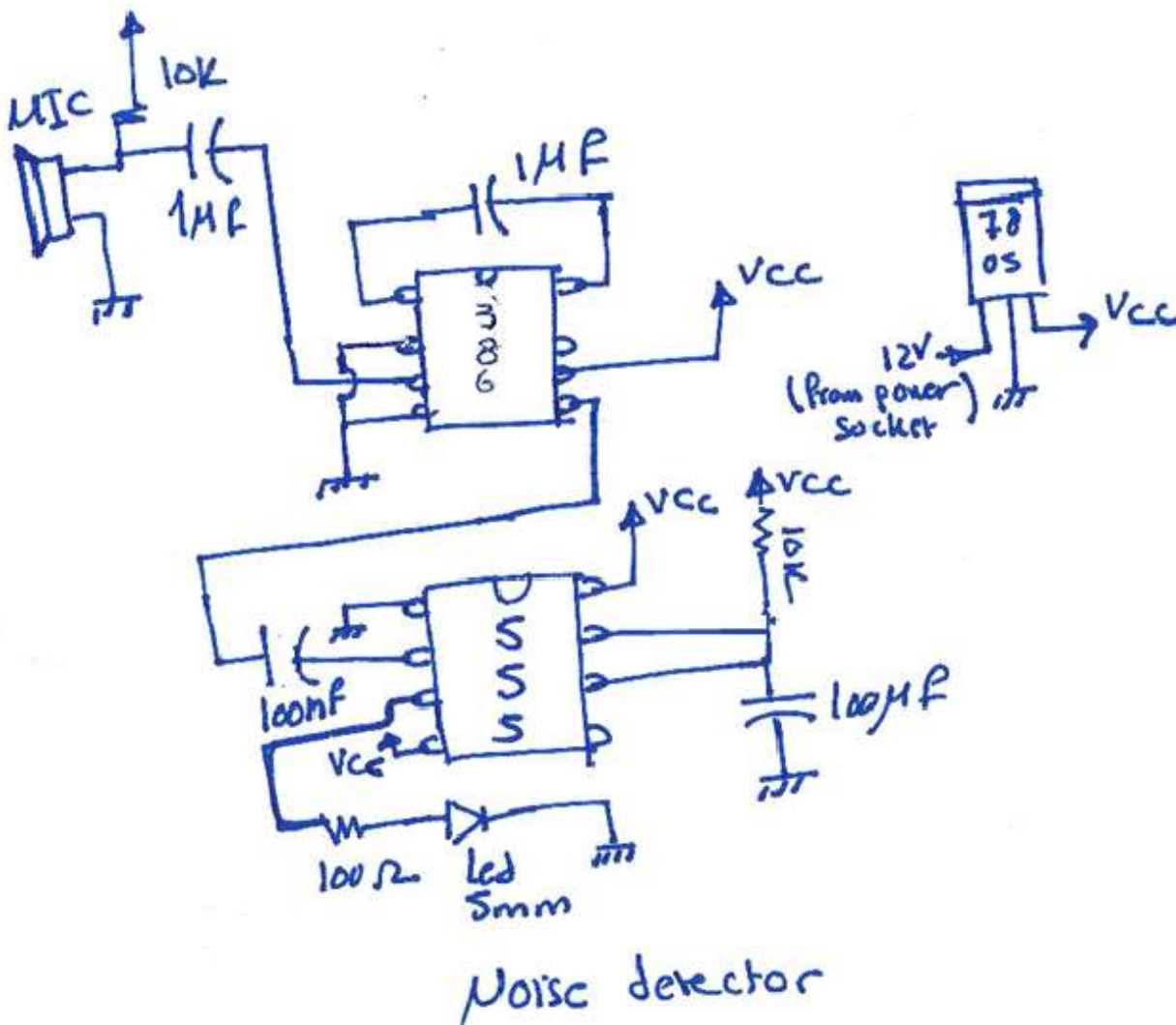
Objective

To build a functional prototype of simple noise detector circuits that light up led for a few seconds in case of noise detected..

Theory

LM386 is a Low Voltage Audio Power Amplifier, that is connected to small pizo microphone. Amplifier triggers 555 upon noise detection. 555 works as one shoot, that light up the connected led upon received trigger.

Schematic





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Components list

| # | item | link | Quantity |
|----|--|---|----------|
| 1 | DC Power 2.1mm Connector on PCB | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=1203 | 1 |
| 2 | Wall Adapter Fixed 12Vdc (1A) | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=1394 | 1 |
| 3 | L7805CV "Positive Voltage Regulator 5V" | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=635 | 1 |
| 4 | LM386 | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=602 | 1 |
| 5 | NE555 | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=609 | 1 |
| 6 | MIC | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=1221 | 1 |
| 7 | Cap 1u | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=476 | 4 |
| 8 | Cap 100n | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=475 | 4 |
| 9 | Cap 100 u | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=504 | 4 |
| 10 | Resistor 100 ohm | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=313 | 10 |
| 11 | Resistor 10 K | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=362 | 10 |
| 12 | Led 5mm | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=228 | 4 |

| | | | |
|----|---|---|---|
| 13 | PCB 15x9 cm2 (PCB4) - Bread Board Shape | http://ram-e-shop.com/oscmax/catalog/product_info.php?products_id=2732 | 1 |
| 14 | Twisted pair wires (1 pair telephone or 4 pairs networks cable) | - | - |



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