# Plan for the Quantum computer demo

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## 1 Description for the demo

We have built a 4 qubit prototype *costing only £10* and uses a rechargeable battery. We use LEDs to show the qubits and there are buttons for user input, we have also written some quantum algorithms which you can run and see what happens to the qubits as it runs. We would like to build a 16 qubit version, however we require more funds to pursue this.

## 2 Part list

### 2.1 Necessary – £214.00

- LEDs: £1 each, £16.00 in total for 16

- LED drivers: £0.72 each, £5.76 for 8 chips

- Buttons: £1 each, £20.00 in total for 20 buttons (may need bigger buttons later for the final demo)

- Shift registers: £0.32 each, £1.60 for 5 chips

- Transistors: £0.12 each, £6.00 for 50

- Resistors: £5.00

- Breadboard and prototyping (reusable for other projects): £50

- Microcontroller (dsPIC33F): £4.54

- Memory chip: £1.68 each, £5.04

- Final PCB: Under £100.

## 2.2   Optional – £110.00

- Development board: £110.00