



CSE 408

Computer Interfacing Sessional

Group # 14

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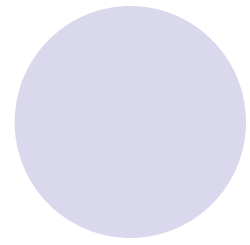
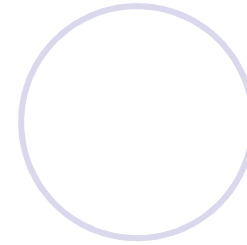
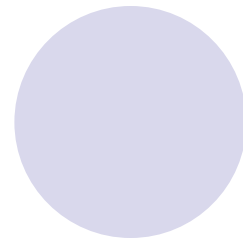
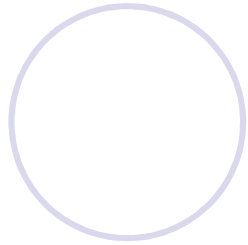
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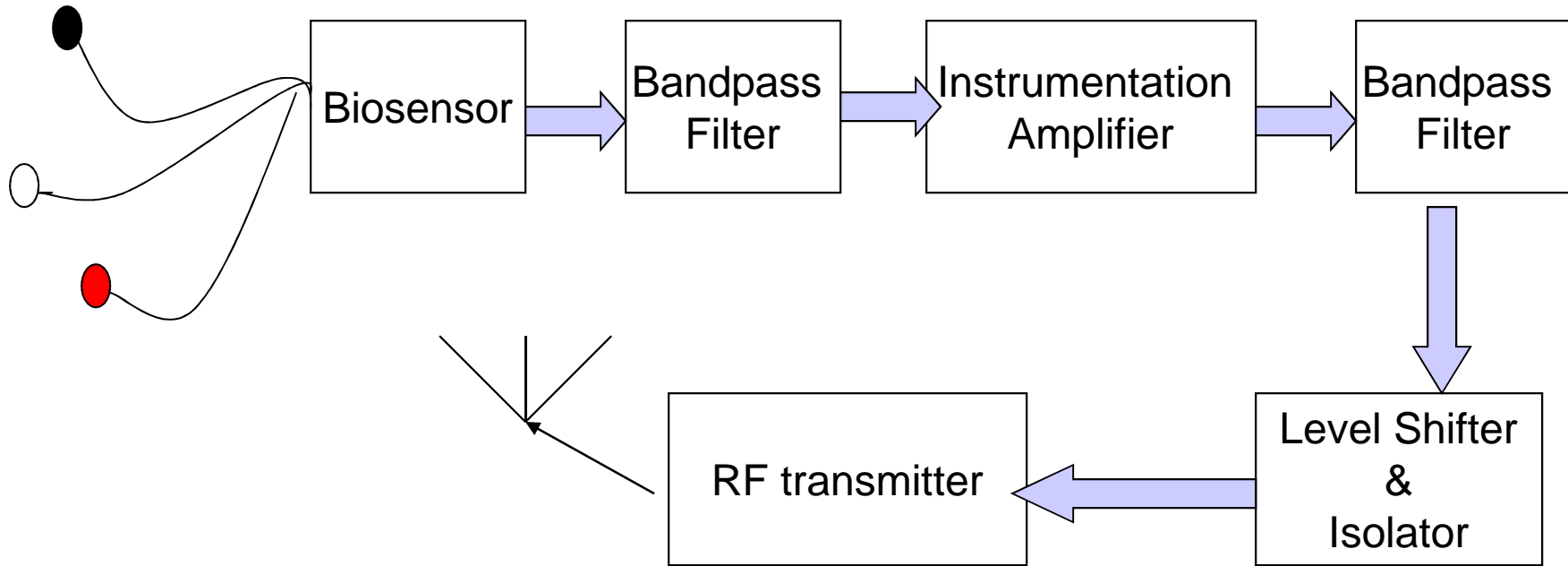
Wireless Electrocardiogram

- Electrocardiogram is a well known medical diagnosis popularly known as ECG or EKG.
- In ECG system the heart signals are read and shown in the display device
- Its largely useful for knowing the cardiac condition of the patient
- We are going to make this ECG system as a wireless device.

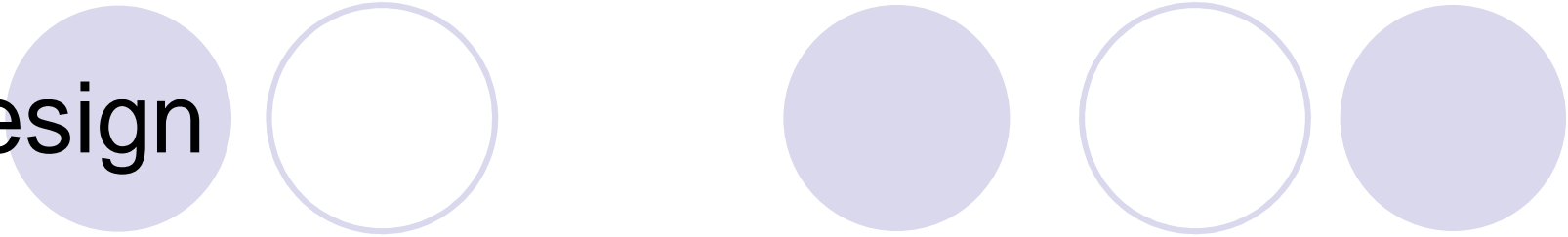
Design



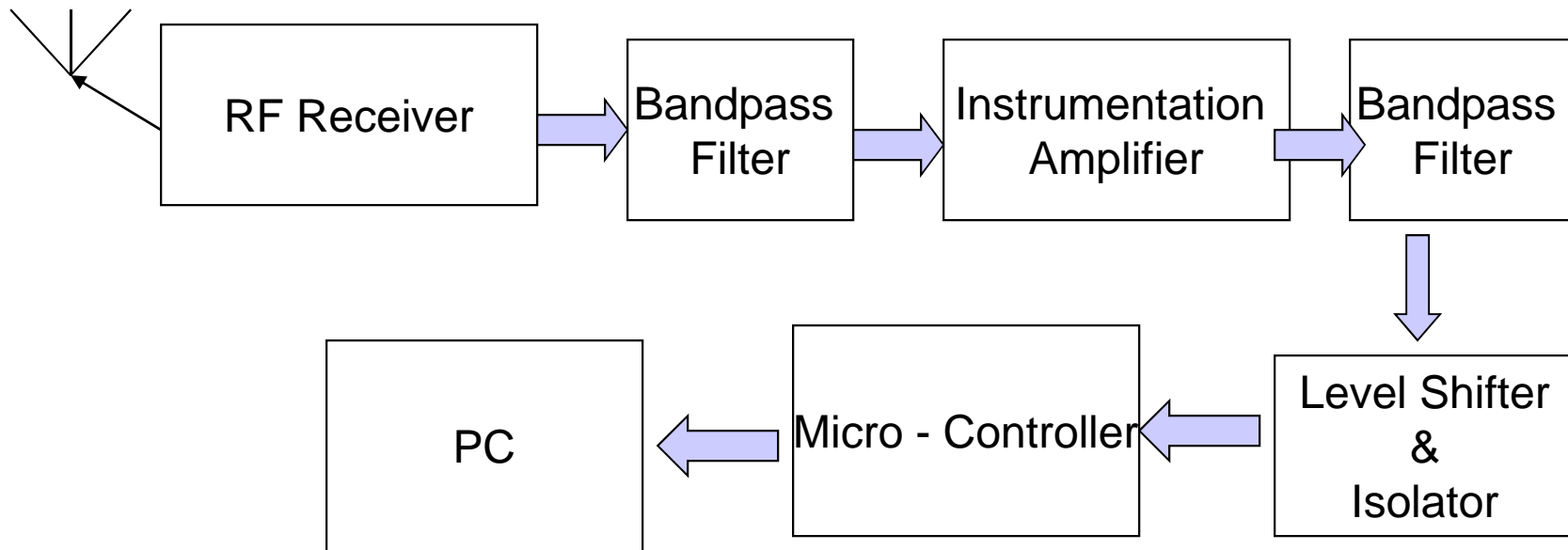
Transmitter side:



Design



Receiver Side:



Modules

A decorative graphic consisting of two groups of three circles. The first group on the left has a solid light purple circle on the left, a white circle with a light purple outline in the middle, and a white circle with a light purple outline on the right. The second group on the right has a solid light purple circle on the left, a white circle with a light purple outline in the middle, and a solid light purple circle on the right.

- Biosensors

We are going to develop a 3 lead ECG system, where the biosensors are placed according to the Einthoven's Triangle.

- Analog Circuit

The analog circuit is made up of the Band pass filters and Instrumentation Amplifier.

Modules



- Level Shifter-Isolator

Level shifter and Isolators are used for voltage incompatibility between the analog and digital circuit

- Radio Frequency Transmitter-Receiver

For wireless communication RFM12B radio transmission –receiving device to be used

Modules



- **Micro-controller**

ATMEGA8 micro-controller with built-in ADC to be used which works in low level voltage

- **Serial-Port interface**

The output from micro-controller to be interfaced with the serial-port where a JAVA program will handle data-communication using javacomm api.



Modification

- Our system will be wireless
- The output to be in real time
- The front-end will provide some medical diagnosis result if we can successfully perform wireless data transmission



Thank You