

[LabTasks.c](#) for PART B

```
#include "SPWS2-echo.h"
```

```
// Input samples
```

```
float LeftInput;
```

```
float RightInput;
```

```
// Output samples
```

```
float loa, lob, loc;
```

```
// Declare any global variables you need
```

```
int D = 1760;
```

```
float alpha_a = 0.75;
```

```
float alpha_b = 0.6;
```

```
float alpha_c = 0.75;
```

```
float x[1760] = {0.0};
```

```
float y_b[1760] = {0.0};
```

```
float y_c[1760] = {0.0};
```

```
int current = 0;
```

```
void EchoFilter(void)
```

```
{
```

```
    // TODO: Implement echo filter (a)
```

```
    //loa = LeftInput;
```

```
    //y[n] = x[n] + alpha*x[current] becuae x[current] is from the last sample period
```

```
    loa = LeftInput + alpha_a*x[current];
```

```
    //y_b[]
```

```
    y_b[current] = LeftInput - alpha_b * y_b[current];
```

```
    // TODO: Implement echo filter (b)
```

```
    lob = y_b[current];
```

```
    //lob = LeftInput;
```

```
    y_c[current] = x[current] - alpha_c * LeftInput + alpha_c*y_c[current];
```

```
    // TODO: Implement echo filter (c)
```

```
    loc = y_c[current];
```

```
    //update the sample
```

```
    x[current] = LeftInput;
```

```
    y2[current] = lob;
```

```
    current++;
```

```
    //printf("%d\n", current);
```

```
    current = current%1760;
```

```
}
```