

Documentation

1. Programming Language

- C++ is used to run this program.

2. Compiling the Files

- Run the following 3 lines to compile all of the 3 programs:

```
g++ -o BrrEncoder EncoderMainProgram.cpp
g++ -o BrrDecoder DecoderMainProgram.cpp
g++ -o PSNR PSNRMMainProgram.cpp
```

3. Input Command Line Syntax

- **BRR Encoder Program**
 - To use this program, input the following syntax with the **input file**, **output file name**
 - Syntax:
./BrrEncoder InputFile OutputFile
Example:
./BrrEncoder sample_sound.bin encoded.bin
- **BRR Decoder Program**
 - To use this program, input the following syntax with the **input file**, **output file name**
 - Syntax:
./BrrDecoder InputFile OutputFile
Example:
./BrrDecoder encoded.bin decoded.bin
- **PSNR Calculator Program**
 - To use this program, input the following syntax with the **original file**, **decoded BRR file**
 - Syntax:
./PSNR OriginalFile DecodedBRRFile
Example:
./PSNR sample_sound.bin decoded.bin

4. Screenshot of a Sample Run

- **BRR Encoder Program**

```
d207-023-184-022:Assignment 2 jasontan$ ./BrrEncoder sample_sound.bin encoded.bin
The file is being encoded...
Encoding Completed!
d207-023-184-022:Assignment 2 jasontan$ █
```

- **BRR Decoder Program**

```
d207-023-184-022:Assignment 2 jasontan$ ./BrrDecoder encoded.bin decoded.bin
The file is being decoded...
Decoding Completed!
d207-023-184-022:Assignment 2 jasontan$ █
```

- **PSNR Calculator Program**

```
d207-023-184-022:Assignment 2 jasontan$ ./PSNR sample_sound.bin decoded.bin
Calculating PSNR...
PSNR of sample_sound.bin and decoded.bin: 226.14
d207-023-184-022:Assignment 2 jasontan$ █
```