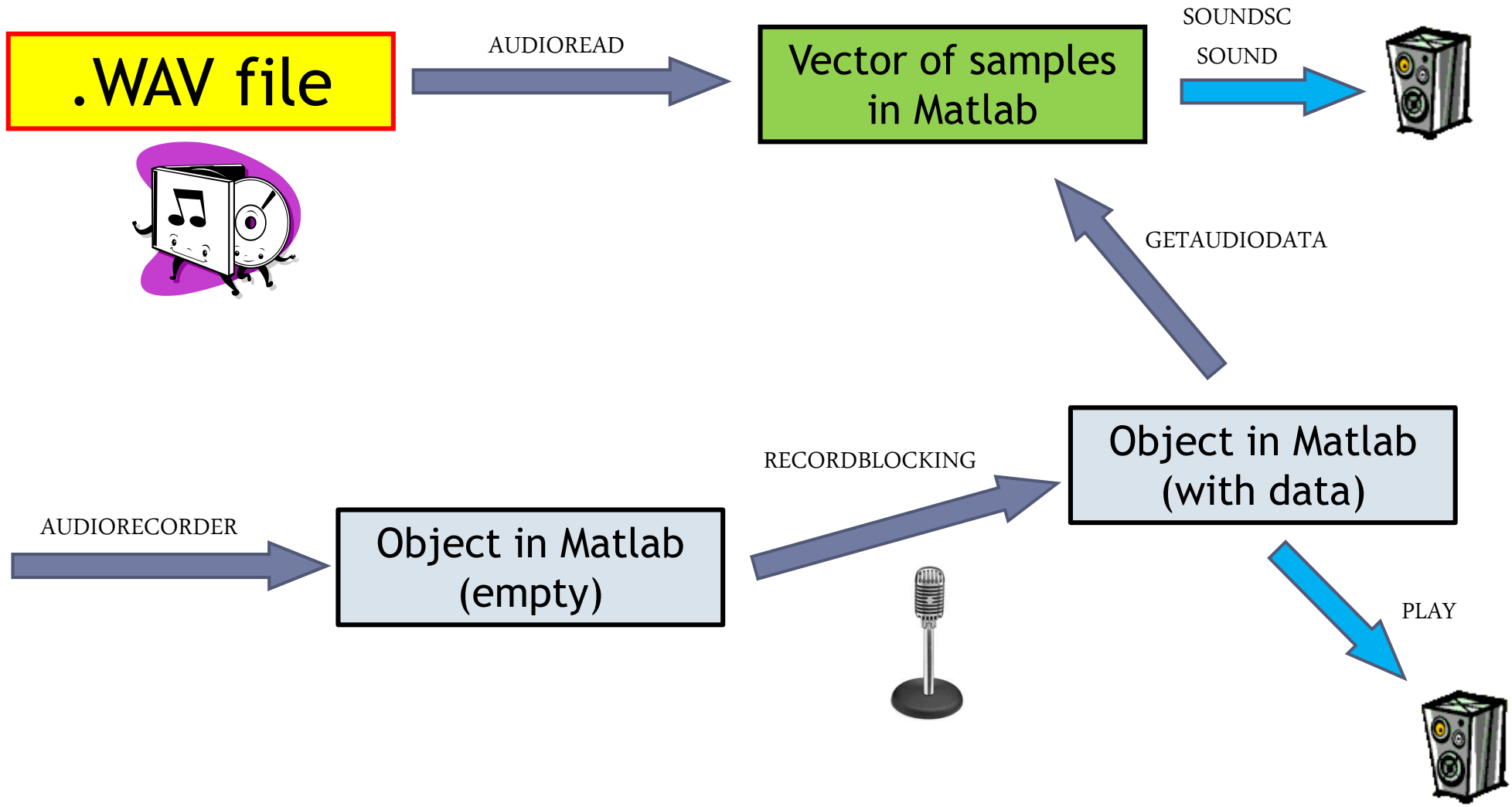
LAB#1 – Part 2

HANDLING AUDIO FILES

HOW TO IMPORT AUDIO DATA IN MATLAB



AUDIORECORDER

Audio recorder object

AUDIORECORDER creates an 8000 Hz, 8-bit, 1 channel object.

A handle to the object is returned.

AUDIORECORDER(Fs, NBITS, NCHANS) creates an AUDIORECORDER object with sample rate Fs in Hertz, number of bits NBITS, and number of channels NCHANS.

Common sample rates are 8000, 11025, 22050, and 44100 Hz
(only 44100, 48000, and 96000 on a Macintosh). The number of bits
must be 8, 16, or 24 on Windows, 8 or 16 on UNIX. The number of channels must be 1 or 2 (mono or stereo).

RECORDBLOCKING

Synchronous recording from audio device.

RECORDBLOCKING(OBJ, T) records for length of time, T, in seconds and does not return until recording is finished.

GETAUDIODATA

Gets recorded audio data in audiorecorder object.

GETAUDIODATA(OBJ) returns the recorded audio data as a double array

SOUND (or SOUNDSC)

Play vector as sound.

SOUND(Y,FS) sends the signal in vector Y (with sample frequency FS) out to the speaker on platforms that support sound. Values in Y are assumed to be in the range -1.0 <= y <= 1.0. Values outside that range are clipped. Stereo sounds are played, on platforms that support it, when Y is an N-by-2 matrix.

SOUND(Y) plays the sound at the default sample rate of 8192 Hz.

SOUNDSC properly scale the amplitude of data to avoid clipping.

PLAY

Plays recorded audio samples in audiorecorder object.

P = PLAY(OBJ) plays the recorded audio samples at the beginning and returns an audioplayer object.

AUDIOREAD

Read Microsoft WAVE (".wav") sound file.

Y=AUDIOREAD(FILE) reads a WAVE file specified by the string FILE, returning the sampled data in Y. The ".wav" extension is appended if no extension is given.

[Y,FS]=AUDIOREAD(FILE) returns also the sample rate (FS) in Hertz used to encode the data in the file.