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## *HMM ASSIGNMENT - Grapheme to Phoneme conversion and vice versa.*

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### Examples of grapheme to phoneme conversion

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Word	Grapheme	Phoneme
GO	g o	/g/ /o/
DO	d o	/d/ /u/
GOD	g o d	/g/ /aw/ /d/
DONE	d o n e	/d/ /aa/ /n/

### Steps to complete the assignment

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#### 1. Download the CMU data

This file contains pairing of grapheme and its equivalent phoneme.

Each pair has format similar to mentioned below.

go <--> /g/ /o/

#### 2. Isolate all the correspondences such that

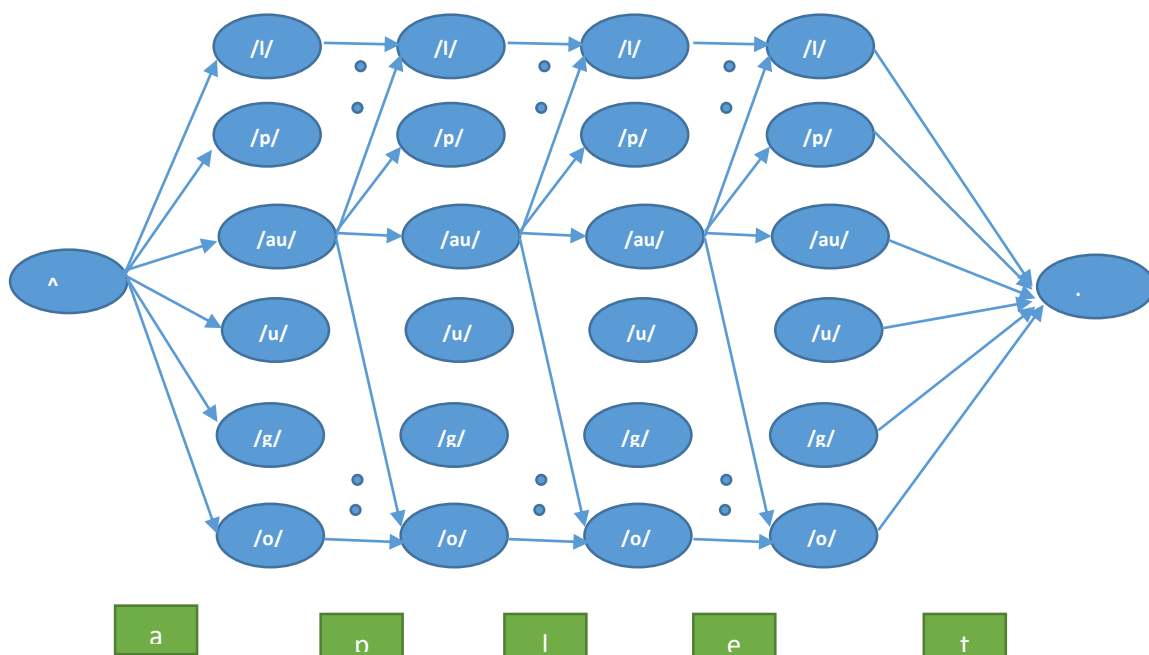
$|\text{grapheme}| = |\text{phoneme}|$

e.g. go <--> /g/ /o/ is a valid correspondence for this assignment whereas

d o n e <--> /d/ /aa/ /n/ is invalid.

#### 3. Train the HMM

In grapheme to phoneme conversion the phoneme vocabulary will represent various states in the trellis whereas graphemes will represent observation sequence and vice versa.



4. Perform five fold cross validation.

5. In the grapheme to phoneme conversion, to test the generated phonemes use "Festival" interface.