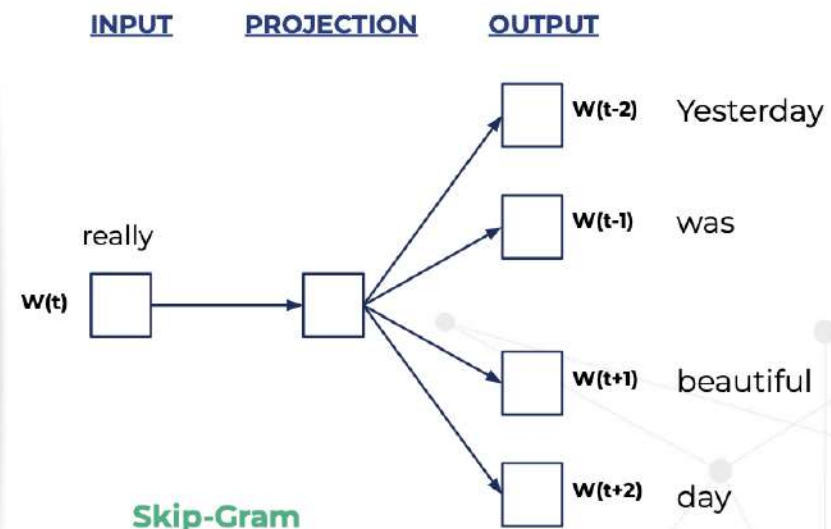
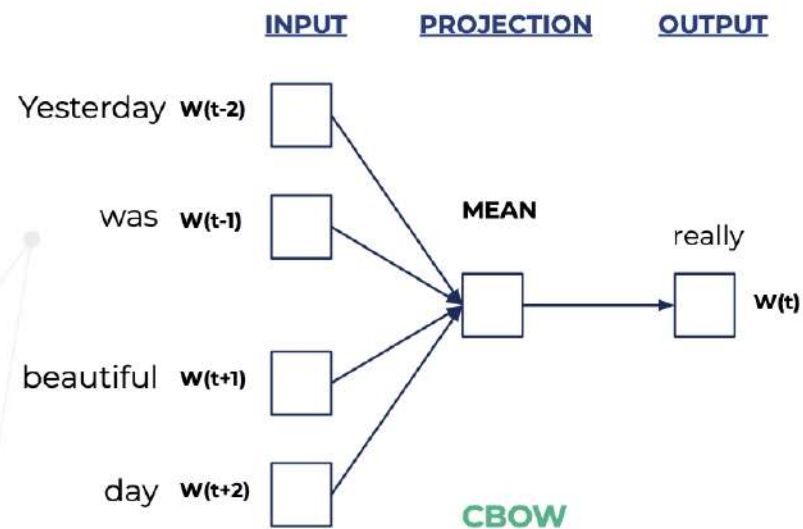
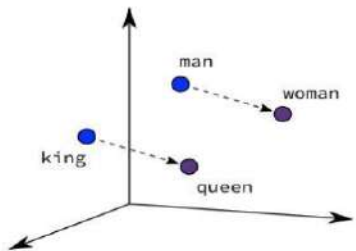


Word2Vec Embedding :

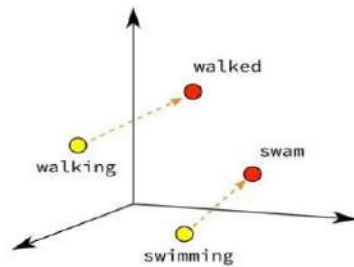
First time applied neural networks to train embeddings



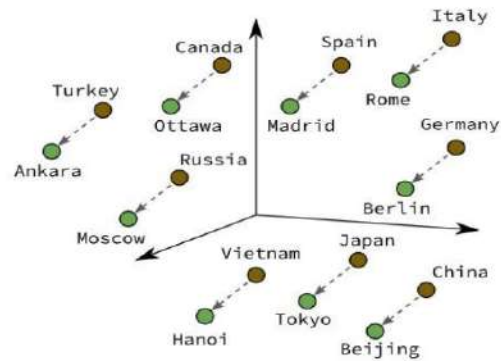
- **Continuous-Bag-of-Words (CBOW)** aims to predict the target word W given a set or a window of surrounding context words.
- **Skip-Gram** uses a single target word to predict C context words.



Male-Female



Verb Tense



Country Capital

$$\text{King} - \text{Man} = \text{Queen} - \text{Woman}$$

$$\text{King} - \text{Man} + \text{Woman} = \text{Queen}$$

Limitations:



Model has very short context equal to window size we select

Search documents and filenames for text



No shared representation at sub-word level



Embeddings are not contextual for transfer learning