

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF COMPUTING AND INFORMATICS**

**DEPARTMENT OF COMPUTER SCIENCE**

**BACHELOR OF SCIENCE IN COMPUTER TECHNOLOGY**

**UNIT NAME: NATURAL LANGUAGE PROCESSING**

**GROUP ASSIGNMENT**

**COURSE CODE: CDS 3400  
GROUP MEMBERS:**

**NAME REGESTRATION NUMBER**

1. **ERNEST OSINDO CT202/103333/20**
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**Group 2: Named Entity Recognition (NER)**

• Develop a Named Entity Recognition system using Python and spaCy or any other suitable library.

• Obtain a dataset containing text documents with named entities.

• Preprocess the data and annotate named entities.

• Train the NER model and evaluate its accuracy and performance.

• Write a report detailing the approach, challenges faced, and possible enhancements for NER systems.

**Here is a github link for the code and a detailed README:** https://github.com/Nyabayo/Group2-NER-Practical-Assignment-.git

import spacy

def perform\_ner(user\_input):

    """

    Perform Named Entity Recognition (NER) on the provided user input using a pre-trained spaCy model.

    Args:

    user\_input (str): A string of text provided by the user for NER.

    """

    # Load the pre-trained spaCy model

    nlp = spacy.load("en\_core\_web\_sm")

    # Process the text

    doc = nlp(user\_input)

    # Check if there are any entities detected

    if doc.ents:

        print("Recognized Entities:")

        for ent in doc.ents:

            print(f"{ent.text}: {ent.label\_}")

    else:

        print("No entities detected in the input.")

# Prompt user for input

user\_input = input("Enter a sentence for NER: ")

perform\_ner(user\_input)

**Sample input from the user:** Amazon, founded by Jeff Bezos in July 1994, started as an online bookstore but has since expanded into a wide array of other e-commerce products and services, including Amazon Web Services, one of the leading cloud computing services globally. Its headquarters is located in Seattle, Washington, and as of 2021, it is one of the world's highest-grossing online retailers.

Output: Recognized Entities:

Amazon: ORG

Jeff Bezos: PERSON

July 1994: DATE

Amazon Web Services: ORG

one: CARDINAL

Seattle: GPE

Washington: GPE

2021: DATE

