Assessment

1. Define Artificial Intelligence (AI) and provide examples of its applications.

Artificial Intelligence: Artificial Intelligence is the ability of machines to think, analyse, learn and decide in a rational way that is analogous to how human beings do.

Examples Of Its Applications:

1. chatbots: AI in chatbots is revolutionizing customer service by introducing chatbots, these automated programs, powered by machine

2. Healthcare: AI applications in healthcare include disease diagnosis, medical imaging analysis, drug discovery, personalized medicine and patient monitoring.

3. Social Media: There are various use of Artificial Intelligence in the field of social-media. Some social media platform such as facebook Instagram etc.

4. Agriculture : Agriculture Optimize farming. Operationals by Collecting and analyzing data from various sources

2. Difference between Supervised and Unsupervised Leaning in ML

Supervised	Unsupervised
1. Input is labelled data	Input data is unlabelled
2. Uses training dataset	Uses just input data
3. data is classified based on training dataset.	data is classified based on given properties of data.
4. Used for prediction	Used for Analysis
5. Known number of classes	Unknown number of classes

3. What is Python? Discuss its main features and advantages.

Python: Python is an interpreted, interactive object Oriented Programming Language. It incorporates Modules, exceptions, dynamic typing, very high level dynamic data types & classes.

features:

. Portable language
. standard library
. High-level language
. Easy to learn and use
. Dynamic language

Advantages:

. strong Community Support
. Wide Ranges of libraries and frameworks
. Interpreted language
. free and open source
. Rapid development

4. What are the advantages of using python as a programming language for AI and ML.

1. A great library ecosystem
2. A low entry barrier
3. Flexibility
4. Plat-form Independence
5. Readability
6. Good visualization options
7. Community Support
8. Growing popularity

5. Discuss the importance of Identation in python Code:

- Python uses Identation to Indicate the scope of Code blocks such as functions, loops, Conditions, classes etc.
- Python uses Indentation instead of brackets to Indicate blocks of Code Incorrect Indentation Could result in an error.
- Indentation will make your code underst -and & read

```
a=10
if a<=0:
    print("negative number")
elif a==0:
    print("zero")
else:
    print("positive number")
```

6. Define a Variable in python provide example of valid & Variable names.

Variable in python:

A variable is a Container which is used to store the data

```
a=10
name="Lahari"
x=22
```

7. Explain the difference between a keyword and an identifier in Python

	Keywords	Identifiers
1.	Keywords are reserved words with special meaning	Identifier is a unique name given to the class function array and so on
2.	Keywords do not have Symbols	Identifier can have symbols
3.	Specify the type	Identify the name of a particular entity

8. List the basic data types available in Python

1. Numeric data types : int, float, Complex
2. String datatypes : str
3. Sequence types : List, tuple, range
4. Binary types : bytes, bytearray, Memory view
5. Mapping datatype : dict
6. Boolean type : bool

9. Describe the syntax for an if statement in python.

If the condition is true, the code block indented below the statement will be executed.

If the condition is false, the code block will be skipped

ex: num = 101

if num > 0:

print("the number is positive.").

10. Explain the purpose of elseif statement in python.

Elseif stands for 'else if' it is used for or used in python programming to test multiple conditions

Example: if marks >= 90:

print("A+ grade")

Elseif mark >= 80 or marks < 90:

print("A grade")

elseif marks >= 70 or marks < 80

print("B+ grade")

else if marks >= 60 or marks < 70

print("B grade")

```
elif marks >= 50 or marks < 60:
    print ("C grade")
else:
    print ("FAIL")
```