**Assignment 12 Solutions**

1. In what modes should the PdfFileReader() and PdfFileWriter() File objects will be opened?

Ans: For PdfFileReader() file objects should be opened in rb -> read binary mode, Whereas for PdfFileWriter() file objects should be opened in wb -> write binary mode.

2. From a PdfFileReader object, how do you get a Page object for page 5?

Ans: PdfFileReader class provides a method called getPage(page\_no) to get a page object.

3. What PdfFileReader variable stores the number of pages in the PDF document?

Ans: getNumPages() method of PdfFileReader class stores the no pages in a PDF document

4. If a PdfFileReader object’s PDF is encrypted with the password swordfish, what must you do before you can obtain Page objects from it?

Ans: If a PdfFileReader object’s PDF is encrypted with the password swordfish and you're not aware of it. first read the Pdf using the PdfFileReader Class. PdfFileReader class provides a attribute called isEncrypted to check whether a pdf is encrypted or not. the method returns true if a pdf is encrypted and vice versa.

if pdf is encrypted use the decrypt() method provided by PdfFileReader class first then try to read the contents/pages of the pdf, else PyPDF2 will raise the following error PyPDF2.utils.PdfReadError: file has not been decrypted

5. What methods do you use to rotate a page?

Ans: PyPDF2 Package provides 2 methods to rotate a page:

rotateClockWise() -> For Clockwise rotation

rotateCounterClockWise() -> For Counter Clockwise rotation

The PyPDF2 package only allows you to rotate a page in increments of 90 degrees. You will receive an AssertionError otherwise.

6. What is the difference between a Run object and a Paragraph object?

Ans: The structure of a document is represented by three different data types in python-Docx. At the highest level, a Document object represents the entire document. The Document object contains a list of Paragraph objects for the paragraphs in the document. (A new paragraph begins whenever the user presses ENTER or RETURN while typing in a Word document.) Each of these Paragraph objects contains a list of one or more Run objects.

The text in a Word document is more than just a string. It has font, size, color, and other styling information associated with it. A style in Word is a collection of these attributes. A Run object is a contiguous run of text with the same style. A new Run object is needed whenever the text style changes.

7. How do you obtain a list of Paragraph objects for a Document object that’s stored in a variable named doc?

# Example Program

from docx import Document

doc = Document("sample\_file.docx") # Path of the Docx file

print(doc.paragraphs) # Prints the list of Paragraph objects for a Document

for paragraph in doc.paragraphs:

print(paragraph.text) # Prints the text in the paragraph

8. What type of object has bold, underline, italic, strike, and outline variables?

Ans: Run object has bold, underline, italic, strike, and outline variables. The text in a Word document is more than just a string. It has font, size, color, and other styling information associated with it.

A style in Word is a collection of these attributes. A Run object is a contiguous run of text with the same style. A new Run object is needed whenever the text style changes.

9. What is the difference between False, True, and None for the bold variable?

bold = True # Style Set to Bold

bold = False # Style Not Set to Bold

bold = None # Style is Not Applicable

10. How do you create a Document object for a new Word document?

# Example Program

from docx import Document

document = Document()

document.add\_paragraph("iNeuron Full Stack DataScience Course")

document.save('mydocument.docx')

11. How do you add a paragraph with the text 'Hello, there!' to a Document object stored in a variable named doc?

# Example Program

from docx import Document

doc = Document()

doc.add\_paragraph('Hello, there!')

doc.save('hello.docx')

12. What integers represent the levels of headings available in Word documents?

Ans: The levels for a heading in a word document can be specified by using the level attribute inside the add\_heading method. There are a total of 5 levels statring for 0 t0 4. where level 0 makes a headline with the horizontal line below the text, whereas the heading level 1 is the main heading. Similarly, the other headings are sub-heading with their's font-sizes in decreasing order.