Python Lab - File Operations and Exception Handling

Question 1

Write a Python script that creates an Excel file named 'students.xlsx' and adds sample student data to it. The sample data includes the names, ages, and grades of three students. Your script should handle any errors that may occur during the file creation process and print an appropriate error message.

Sample Data:
Student 1: Name - 'John Smith', Age - 18, Grade - 12
Student 2: Name - 'Emily Johnson', Age - 17, Grade - 11
Student 3: Name - 'Michael Brown', Age - 16, Grade - 10

Question 2

You need to create a Python script that ensures the existence of a directory named 'backup'. If the directory already exists, the script should proceed without any changes; however, if the 'backup' directory is not present, the script should create it.

Question 3

Create a function that divides two numbers and handles the ZeroDivisionError exception if the divisor is zero.

Question 4

Write a function that recursively searches for all files with a specific extension (e.g., '.py') in a given directory and its subdirectories.