





File

Edit

View

Navigate

Code

Refactor

Build

Run

Tools

VCS

Window

Help

Assignment 1.iml - Main.java

Assignment 1

src

Main.java

DynamicArray

insertEmployee

Project

Assignment 1

External Libraries

Scratches and Consoles

Project

Assignment 1.iml

50

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

1 usage

@

public static boolean simpleProbabilisticSearch(Employee[] arr, String name) {

Random random = new Random();

int attempts = 0;

int maxAttempts = arr.length \* 2; // Arbitrary limit to avoid infinite loop.

while (attempts < maxAttempts) {

int index = random.nextInt(arr.length);

if (arr[index].getName().equalsIgnoreCase(name)) {

System.out.println("Found '" + name + "' at index " + index + " after " + attempts + " attempts.");

return true;

}

attempts++;

}

System.out.println("'" + name + "' not found after " + maxAttempts + " attempts.");

return false;

}

1 usage

@

public static boolean sentinelSearch(Employee[] arr, String name) {

int i = 0;

int n = arr.length;

String last = arr[n - 1].getName();

arr[n - 1] = new Employee(name, -1); // Sentinel

while (!arr[i].getName().equalsIgnoreCase(name)) {

i++;

}

Version Control

TODO

Problems

Terminal

Services

Microsoft Defender configuration: The IDE has detected Microsoft Defender with Real-Time Protection enabled. It might severely degrade IDE performance. It is recommended to add f... (4 minutes ago)

41:6

LF

UTF-8

Assignment 1.iml

Material Oceanic

4 spaces

9:43 PM

12/21/2023



FileEditViewNavigateCodeRefactorBuildRunToolsVCSWindowHelpAssignment 1.iml - Main.java

Assignment 1 › src › Main.java › Main › main

Project

Assignment 1E:\3rd Semester\DSA\Code

External Libraries

Scratches and Consoles

Main.java

Assignment 1.iml

91

}

92

93

arr[n - 1] = new Employee(last, -1); // Restore last element

94

return i < n - 1 || arr[n - 1].getName().equalsIgnoreCase(name);

95

}

96

}

97

98

public class Main {

99

public static void main(String[] args) {

100

Employee[] employees = new Employee[0];

101

String fileName = "EmployeeData.txt";

102

103

try (BufferedReader br = new BufferedReader(new FileReader(fileName))) {

104

String line;

105

while ((line = br.readLine()) != null) {

106

String[] parts = line.split(" ");

107

Employee emp = new Employee(parts[0], Integer.parseInt(parts[1].trim()));

108

employees = DynamicArray.insertEmployee(employees, emp);

109

System.out.println("Employee Added: " + emp);

110

}

111

} catch (IOException e) {

112

e.printStackTrace();

113

}

114

115

// Linear search

116

String searchName = "Maaz khan";

117

System.out.println("\nPerforming Linear Search for: " + searchName);

118

int index = DynamicArray.linearSearch(employees, searchName);

119

if (index != -1) {

120

System.out.println("Employee found (Linear Search): " + employees[index]);

121

} else {

122

System.out.println("Employee not found (Linear Search)");

123

}

124

125

// Binary search (requires sorted array)

Notifications

3 2

Version Control

TODO

Problems

Terminal

Services

Microsoft Defender configuration: The IDE has detected Microsoft Defender with Real-Time Protection enabled. It might severely degrade IDE performance. It is recommended to ad... (4 minutes ago)

115:25

LF

UTF-8

Assignment 1.iml

Material Oceanic

4 spaces

Windows Taskbar

9:43 PM

12/21/2023





