



Team name:

CODE *PJMP\$*

Featuring :

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There were errors in 50% of the programs from class008_test (basically 1 or 2 errors in wrong program).

But there were rare cases like Nikola_Marinov_20_add57e.rb with 17 errors in 40 lines of code, too. We found 6 correctly working programs.

Common errors:

Error type “undefined method ” for nil:NilClass (NoMethodError) “: This was the most common error type in the wrong programs. It occurs when you try to use method to “nil” (for example “.length”, “+” and etc).

Code example:

```
1.Dir.glob("#{ARGV[0]}/**/*.rb") do |current_file|
2.name = current_file.split('/').last.split(/_/)
3.if name[1].length == 5
4. if not students_names.include?("#{name[1]}", "#{name[0]}") then
5.   students_names << (["#{name[1]}", "#{name[0]}"])
6. end
7.end
```

If the directory “#{ARGV[0]}/**/” contains file.rb which not include ‘_’, on line 2 the array “name” will contain only nil values. Then on line 3 “name[1]” will be nil and when you try method “length” on “name[1]” it will throw error.

Solution:

```
1.Dir.glob("#{ARGV[0]}/**/*.rb") do |current_file|
2.name = current_file.split('/').last.split(/_/)
3.if name[1] != nil and name[1].length == 5
4. if not students_names.include?("#{name[1]}", "#{name[0]}") then
5.   students_names << (["#{name[1]}", "#{name[0]}"])
6. end
7.end
```

On line 3 add a check if name[1] != nil.

Error type “undefined local variable or method `name' for main:Object (NameError)”:

This type of error mostly occurs because the scope of variables in ruby or wrong name of variable

Code example:

```
1.Dir.glob("#{ARGV[0]}/*") do |path|
2.  name = path.split(/\/).last
3.end
4.
5.for i in 0..2
6.  result = name
7.  puts result
8.end
```

In this case the variable “name” is only visible in 1-3 line. So when you try to pass the value of “name” to “result” it throws error

Solution:

```
0.name = ""
1.Dir.glob("#{ARGV[0]}/*") do |path|
2.  name = path.split(/\/).last
3.end
4.
5.for i in 0..2
6.  result = name
7.  puts result
8.end
```

Use global variables. At line 0 we define name with value “”. The variable name is visible in the whole problem and results will be equal to the last path Dir.glob() returns.

Common problems:

The most common problem:

“No such file or directory - result.csv. No result.csv file was found.”

Its solution its simple just check how you name your output csv.

There were some sorting issues, too:

The solution here is to learn how to use sort_by or other sorting method.

Some students had syntax problems.

These errors could be avoided at first place with N simple steps:

1. Read task's condition carefully.
2. Use only functions and methods which you know how they work.
3. Expect invalid files (not in the correct format) and try to ignore them.

APPENDIXES:

David_Georgiev_12_1eea4f.rb

program code:

```
require 'csv'
students_names = []
Dir.glob("#{ARGV[0]}/**/*.*rb") do |current_file|

  name = current_file.split('/').last.split(/_/)
  if name[1].length == 5
    if not students_names.include?("#{name[1]}", "#{name[0]}") then
      students_names << (["#{name[1]}", "#{name[0]}"])
    end
  end
end
CSV.open("result.csv", "w") do |csv|
  students_names.sort.each do |last, first|
    csv << ["#{first}", "#{last}"]
  end
end
```

Problems (Errors: 1):

Common error:

"David_Georgiev_12_1eea4f.rb:20:in `block in <main>': undefined method `length' for nil:NilClass (NoMethodError) from ../results/b/results/David_Georgiev_12_1eea4f.rb:17:in `glob' from ../results/b/results/David_Georgiev_12_1eea4f.rb:17:in `<main>' "

Solution: **if name[1] != nil && name[1].length == 5**

Program rank: 4

lliyan_Germanov_17_f8b0d9.rb

program code:

```
require 'csv'
results = Hash.new
results.compare_by_identity
def is_number(str)
  str[/[0-9]+/] == str
end
Dir.glob("#{ARGV[0]}/*.rb") do |path1|
  filename1 = path1.split(/\/\//).last
  if filename1.count("_") == 2
    firstname1 = filename1.split("_").first
    lastname1 = filename1.split("_")[1]
    digit1 = filename1.split("_")[2].split(".").first
    if is_number(digit1)
      flag = 0
      Dir.glob("#{ARGV[1]}/*.rb") do |path2|
        filename2 = path2.split(/\/\//).last
        if filename2.count("_") == 2
          digit2 = filename2.split("_")[2].split(".").first
          if is_number(digit2)
            name1 = firstname1 + lastname1
            name2 = filename2.split("_").first +
filename2.split("_")[1]
            if name1 == name2
              flag = 1
              break
            end
          end
        end
      end
    end
    if flag == 0
      results[lastname1] = firstname1
    end
  end
end
end
end

CSV.open("result.csv", "w") do |csv|
  results.sort_by{|key, val| key}.each do |el|
    csv << el
  end
end
```

Problems (Errors: 0):

Program is working correctly!

Wrong expected results:

Expected: LastName4,FirstName4 L5le3_3,F5le3

Output csv: L5le3,F5le3

Program rank: 5

Stefan_Iliev_28_d77aee.rb

program code:

```
require 'csv'
first_folder = ARGV.shift
second_folder = ARGV.shift || "err"
names_hash = Hash.new

Dir.glob(first_folder+"/*.*").each do |text_file|
  text_file = text_file.split("/").last
  if (text_file.split("_").length == 3) then
    first_name = text_file.split("_")[0]
    second_name = text_file.split("_")[1]
    diggit = text_file.split("_")[2].split(/\./).first
    if (diggit.to_i.to_s != diggit) then names_hash[text_file] = text_file.length
  end
  if (first_name =~ /\d/) then names_hash[text_file] = text_file.length end
  if (second_name =~ /\d/) then names_hash[text_file] = text_file.length
end
else
  names_hash[text_file] = text_file.length
end
end
if second_folder != "err"
  Dir.glob(second_folder+"/*.*").each do |text_file|
    text_file = text_file.split("/").last
    if (text_file.split("_").length == 3) then
      first_name = text_file.split("_")[0]
      second_name = text_file.split("_")[1]
      diggit = text_file.split("_")[2].split(/\./).first
      if (diggit.to_i.to_s != diggit) then names_hash[text_file] =
text_file.length end
      if (first_name =~ /\d/) then names_hash[text_file] = text_file.length
    end
      if (second_name =~ /\d/) then names_hash[text_file] =
text_file.length end
    else
      names_hash[text_file] = text_file.length
    end
  end
end
names_hash = Hash[names_hash.sort_by{|k,v| k}]
names_hash = Hash[names_hash.sort_by{|k,v| v}]
puts names_hash

CSV.open("results.csv","w") do |csv|
  names_hash.each do |element|
    csv << element
  end
end
```

Problem (Errors: 0):

Common problem: "No such file or directory - result.csv. No result.csv file was found."

Solution: **"results.csv" => "result.csv"**

Program rank: 5

Stanislav_Iliev_26_627d43.rb

program code:

```
require 'csv'
name_array = Array.new()
name_array2 = Array.new()
support_array = Array.new()
support_array2 = Array.new()
i = 0
dir1 = ARGV[0]
dir2= ARGV[1]

Dir.glob("#{dir1}/*.txt") do |file|
  name_array[i] = file.split(/\/\//).last
  i += 1
end
count = i
i = 0
Dir.glob("#{dir2}/*.txt") do |file2|
  name_array2[i] = file2.split(/\/\//).last
  i += 1
end
i = 0
for check in i..count
  if name_array[check] != name_array2[check]
    support_array[i] = name_array[check]
    support_array2[i] = name_array2[check]
    i += 1
    puts support_array
    puts support_array2
    CSV.open("result.csv", "w") do |csv|
      support_array.each do |element|
        csv << [element]
      end
    end
    CSV.open("result.csv", "w") do |csv|
      support_array2.each do |element2|
        csv << [element2]
      end
    end
  end
end
end
```

Problems (Errors: 0):

Solution: There is no quick solution.

Program rank: 3

Nikolay_Mihailov_25_f70059.rb

program code:

```
require 'csv'
hash = Hash.new
count = 0
Dir.glob(ARGV[0] + "/*.rb") do |file|

  first = file.split(/\/\//).last
  puts first

  #for (i = 0;i < first.length;i+=1)
  size = first.length
  i = 0
  first.each do |element|

    c = first[i].chr
    if element == 0 || element == 1 || element == 2 || element == 3
|| element == 4 || element == 5 || element == 6 || element == 7 || element == 8
|| element == 9
      count +=1
    end
  end
  puts count
end

Dir.glob(ARGV[1] + "/*.rb") do |secFile|
  sec = secFile.split(/\/\//).last
  #puts sec

end

CSV.open("result.csv", "w") do |csv|
  hash.sort_by{|key,val| key}.each do |element|
    csv << element
  end
end
```

Problems (Errors: 1):

Error:

```
"Nikolay_Mihailov_25_f70059.rb:26:in `block in <main>': undefined method `each' for
"F10letter3_L10letter4.rb":String (NoMethodError) from
../results/b/results/Nikolay_Mihailov_25_f70059.rb:18:in `glob' from
../results/b/results/Nikolay_Mihailov_25_f70059.rb:18:in `<main>' "
```

Solution: There is no quick solution.

Program rank: 3

Borislav_Stratev_2_a65be5.rb

program code:

```
require 'csv'
a = Array.new
h = Hash.new
Dir.glob("#{ARGV[0]}/*.rb") do |dir_file_name_1|
  Dir.glob("#{ARGV[1]}/*.rb") do |dir_file_name_2|

    file_name_1 = dir_file_name_1.split(/\//).last.to_s
    file_name_2 = dir_file_name_2.split(/\//).last.to_s

    if(file_name_1 != file_name_2)
      file_name = file_name_1
      digit = file_name.split(/_/).last.split(/\./).first.to_s
      first_name = file_name.split(/_/).first.to_s
      full_first_name = first_name + digit
      full_first_name = full_first_name.to_s
      tmp = file_name.split("#{first_name}_")
      full_last_name = tmp.last.split(/_/).first.to_s + digit
      full_last_name = full_last_name.to_s
      h[full_last_name] = full_first_name
    end
  end
end

CSV.open("results.csv", "w") do |csv|
  a = h.sort
  a.each do |element|
    csv << element
  end
end
```

Problems (Errors: 0):

Common problem: "No such file or directory - result.csv. No result.csv file was found."

Solution: There is no quick solution.

"results.csv" => "result.csv" (only for the common problem)

Program rank: 3

Lili_Kokalova_22_e0ea9c.rb

program code:

```
require 'csv'
```

```
student = Array.new
```

```
student1 = Array.new
```

```
Dir.glob(ARGV[0]+'/**/*.rb').each do |file_name1|
  file_name = file_name1.split("/").last
  first_name = file_name.split("/").last.split("_").first
  p first_name
  last_name = file_name.split("/").last.split("_",2).last.split("_").first
  #task = file_name.split("_").last.split(".").first
  student << ["#{first_name}", "#{last_name}"]
end
```

```
Dir.glob(ARGV[1]+'/**/*.rb').each do |file_name1|
  file_name = file_name1.split("/").last
  first_name = file_name.split("/").last.split("_").first
  p first_name
  last_name = file_name.split("/").last.split("_",2).last.split("_").first
  #task = file_name.split("_").last.split(".").first
  student1 << ["#{first_name}", "#{last_name}"]
end
```

```
CSV.open("result.csv", "w") do |csv|
  student.each do |fn, ln|
    student1.each do |fn1, ln1|
      if fn != fn1
        if ln != ln1
          csv << ["#{fn1}", "#{ln1}"]
        end
      end
    end
  end
end
```

Problems (Errors: 0):

Solution: There is no quick solution.

Program rank: 3

Valentin_Varbanov_4_041472.rb

program code:

```
students_first_dir = Array.new
students_second_dir = Array.new

for i in 0..1
  directory = ARGV[i]
  if ARGV[i].split(/\/).last(1).to_s == "/"
    directory += "**/*.rb"
  else
    directory += "**/*/*.rb"
  end
  Dir.glob(directory).each do |dir|
    student = dir.split(/\//)
    if i == 0
      students_first_dir.push(student)
    else
      students_second_dir.push(student)
    end
  end
end

end

studentcsv = Array.new

students_first_dir.each do |std|
  match = 0
  students_second_dir.each do |std2|
    name = std.last.split(/_/)

    name2 = std2.last.split(/_/)
    for i in 0..1
      if name[i] == name2[i]
        match = 1
      end
    end
    end
    studentcsv.push(name[1], name[2])
  end

end

CSV.open("result.csv", "w") do |csv|
  studentcsv.each do |string|
    csv << string
  end
end
```

Problems (Errors: 3):

Errors:

```
“./results/b/results/Valentin_Varbanov_4_041472.rb:57:in `block in <main>’: undefined
local variable or method `name’ for main:Object (NameError) from
../results/b/results/Valentin_Varbanov_4_041472.rb:44:in `each’ from
../results/b/results/Valentin_Varbanov_4_041472.rb:44:in `<main>’ “
“Valentin_Varbanov_4_041472.rb:60:in `<main>’: uninitialized constant CSV
(NameError) ”
“/usr/lib/ruby/1.9.1/csv.rb:1729:in `<<’: undefined method `map’ for "Lastname":String
(NoMethodError)
  from Valentin_Varbanov_4_041472.rb:63:in `block (2 levels) in <main>’
  from Valentin_Varbanov_4_041472.rb:62:in `each’
  from Valentin_Varbanov_4_041472.rb:62:in `block in <main>’
  from /usr/lib/ruby/1.9.1/csv.rb:1354:in `open’
  from Valentin_Varbanov_4_041472.rb:61:in `<main>’
“
```

Solution: There is no quick solution.

Program rank: 1

Vladimir_Yordanov_9_4bbed0.rb

program code:

```
names = Hash.new
Dir.glob (ARGV[0] + "**.rb") do | file |
  if (ARGV[1] == true)
    ARGV[1] == false
  end

  slice = file.split("/").last
  first_name = slice.split('_')[0]
  second_name = slice.split('_')[1]
  if (second_name.length == 5)
    #print first_name
    #puts second_name
    names[first_name] = second_name
  end

end

names = names.sort
puts names

require 'csv'
CSV.open("results.csv", "w") do | csv |
  names.to_a.each do | element |
    csv << element
  end
end
```

Problems (Errors: 1):

Common error:

```
"Vladimir_Yordanov_9_4bbed0.rb:26:in `block in <main>': undefined method `length'
for nil:NilClass (NoMethodError) from
../results/b/results/Vladimir_Yordanov_9_4bbed0.rb:18:in `glob' from
../results/b/results/Vladimir_Yordanov_9_4bbed0.rb:18:in `<main>' "
```

Common problem: "No such file or directory - result.csv. No result.csv file was found."

Solution:

Common error:

```
if (second_name.length == 5) => if second_name != nil and
second_name.length == 5
```

Common problem:

```
"results.csv" => "result.csv"
```

Dir.glob problem:

```
"*.rb" => "/*.rb"
```

Sort problem:

```
names = names.sort_by{| key, val| [val, key]}
```

Program rank: 4

Veselina_Kolova_8_65630e.rb

program code:

```
require 'csv'
```

```
people = Hash.new
```

```
Dir.glob("#{ARGV[0]}/**/*.*").each do |text_file|
```

```
    if File.extname(text_file) text_file.include?(".rb") &&
text_file.split(/_/).last.split(/\./).first.to_i.is_a Integer then
        if (text_file.split("/").last.split("_").length == 3) then
            text_file = text_file.split("/").last
            if (text_file.split("_")[1].length == 5) then
                people[text_file.split("_")[1]] = text_file.split("_")[0]
            end
        end
    end
end
```

```
people = Hash[people.sort_by{| k,v | k}.reverse]
```

```
CSV.open("result.csv","w") do |csv|
    people.each do |element|
        csv << element
    end
end
```

Problems (Errors: 1):

Error:

```
"Veselina_Kolova_8_65630e.rb:23: syntax error, unexpected tIDENTIFIER, expecting
keyword_then or ';' or '\n' ...le.extname(text_file) text_file.include?(".rb") && text_file... ...
^ ../results/b/results/Veselina_Kolova_8_65630e.rb:23: syntax error, unexpected
tCONSTANT, expecting keyword_end ...t(/\./).first.to_i.is_a Integer then ... ^
../results/b/results/Veselina_Kolova_8_65630e.rb:31: syntax error, unexpected
keyword_end, expecting $end "
```

Solution:

```
    if File.extname(text_file) text_file.include?(".rb") &&
text_file.split(/_/).last.split(/\./).first.to_i.is_a Integer then =>
    if File.extname(text_file) && text_file.include?(".rb") &&
text_file.split(/_/).last.split(/\./).first.to_i.to_s == text_file.split(/_/).last.split(/\./).first then
```

Program rank: 4

Denis_Trenchev_4_b4c3f5.rb

program code:

```
require 'csv'
```

```
i = 0
```

```
arr1 = []
```

```
arr2 = []
```

```
arr3 = []
```

```
Dir.glob(ARGV[0]+"*.rb") do |first_folder|
```

```
  name = first_folder.split('/').last.split('.').first.split('_')
```

```
  if name.length == 3
```

```
    if name[1].to_s.length == 5
```

```
      arr1[i] = []
```

```
      arr[i][0] = name[0]
```

```
      arr[i][1] = name[1]
```

```
      i+=1
```

```
    end
```

```
  end
```

```
end
```

```
i = 0
```

```
Dir.glob(ARGV[1]+"*.rb") do |second_folder|
```

```
  name = second_folder.split('/').last.split('.').first.split('_')
```

```
  if name.length == 3
```

```
    if name[1].to_s.length == 5
```

```
      arr1[i] = []
```

```
      arr[i][0] = name_1[0] #ZIBIT NOT APPROVED there is no arr
```

```
      arr[i][1] = name_1[1]
```

```
      i+=1
```

```
    end
```

```
  end
```

```
end
```

```
i = 0
```

```
arr1.each do |compare1|
```

```
  arr2.each do |compare2|
```

```
    if compare2 == compare1
```

```
      arr3[i] = compare1
```

```
      i+=1
```

```
    end
```

```
  end
```

```
end
```

```
sort = arr3.sort_by{|asd| asd[1]}
```

```
CSV.open("students.csv", "w") do |csv| #WTF IS STUDENTS.CSV (result) NIGGA
```

```
  sort.each do |element|
```

```
    csv << element
```

```
  end
```

```
end
```


Problems (Errors: 1):

Error:

"Denis_Trenchev_4_b4c3f5.rb:31:in `block in <main>': undefined local variable or method `arr' for main:Object (NameError) from
../results/a/results/Denis_Trenchev_4_b4c3f5.rb:25:in `glob' from
../results/a/results/Denis_Trenchev_4_b4c3f5.rb:25:in `<main>' "

Solution:

```
arr[i][0] = name[0] => arr1[i][0] = name[0]  
arr[i][1] = name[1] => arr1[i][1] = name[1]
```

```
arr[i][0] = name_1[0] => arr2[i][0] = name[0]  
arr[i][1] = name_1[1] => arr2[i][1] = name[1]
```

```
students.csv => result.csv
```

Program rank: 3

Marian_Belchev_17_ad26e0.rb

program code:

```
require 'csv'
```

```
hash1 = Hash.new
```

```
hash2 = Hash.new
```

```
Dir.glob("#{ARGV[0]}*_**.rb") do |file1|
```

```
  Dir.glob("#{ARGV[1]}*_**.rb") do |file2|
```

```
    firstName1 = file1.split("/").last.split("_").first
```

```
    lastName1   = file1.split("/").last.split("_", 2).last.split("_").first
```

```
    number1 = file1.split("_").last.split(".").first
```

```
    firstName2 = file2.split("/").last.split("_").first
```

```
    lastName2  = file2.split("/").last.split("_", 2).last.split("_").first
```

```
    number2 = file2.split("_").last.split(".").first
```

```
    hash1[firstName1] = lastName1 + "." + number1
```

```
    hash2[firstName2] = lastName2 + "." + number2
```

```
  end
```

```
end
```

```
CSV.open("results.csv", "w") do |csv|
```

```
  hash2.sort.each do |key, value|
```

```
    if !hash1.has_key?(key) && !hash1.has_value?(value.split(".").first) &&
```

```
    !hash1.has_value?(value.split(".").last.to_i)
```

```
      csv << [key,value.gsub('.',",")]
```

```
    end
```

```
    if hash1.has_key?(key) && !hash1.has_value?(value.split(".").first) &&
```

```
    !hash1.has_value?(value.split(".").last.to_i)
```

```
      csv << [key,value.gsub('.',",")]
```

```
    end
```

```
  end
```

```
end
```

Problems (Errors: 0):

Solution:

```
"#{ARGV[0]}*_**.rb" => "#{ARGV[0]}/_*_**.rb"
```

```
"#{ARGV[1]}*_**.rb" => "#{ARGV[1]}/_*_**.rb"
```

```
"results.csv" => "result.csv"
```

Suggestions:

use hash.compare_by_identity so duplicate keys won't be discarded

Program rank: 4

Ivelin_Slavchev_10_835552.rb

program code:

```
require 'csv'
result = Hash.new
Dir.glob(ARGV[0] + "**").each do |file1|
  short1 = file1.split("/").last
  ext1 = short1.split(".").last
  names1 = short1.split(".").first
  digit1 = file1.split("_").last
  if (ext1 != "rb") or (digit1.to_i.to_s != digit1) or (short1.scan("_").count != 2)
    result[short1] = short1.length
  end
end
Dir.glob(ARGV[1] + "**").each do |file2|
  short2 = file2.split("/").last
  ext2 = short2.split(".").last
  names2 = short2.split(".").first
  digit2 = file2.split("_").last
  if (ext2 != "rb") or (digit2.to_i.to_s != digit) or (short2.scan("_").count != 2)
    result[short2] = short2.length
  end
end
result.sort_by{|k, v| v}
CSV.open("result.csv", "w") do |csv|
  result.each do |p|
    csv << p
  end
end
```

Problems (Errors: 1):

Error:

(digit2.to_i.to_s != digit) => (digit2.to_i.to_s != digit2)

Sort problem:

result.sort_by{|k, v| v} => result.sort_by{|k, v| [v, k]}

Program rank: 4

Stanislav_Valkanov_25_4482c1.rb

program code:

```
require 'csv'
a = Hash.new
path = ARGV[0]
Dir.glob(path + "**/*.rb") do |my_text_file|
  short_name = my_text_file.split('/').last.split('.').first
  name = short_name.split("_")[0]
  last = short_name.split("_")[1]
  last.to_s
  if (last.length == 5)&&(short_name.split("_").size == 3)
    a["#{name}"] = last
  end
end
CSV.open("result.csv", "w") do |csv|
  Hash[a.sort.reverse].each do |element|
    csv << element
  end
end
```

Problems (Errors: 1):

```
"Stanislav_Valkanov_25_4482c1.rb:23:in `block in <main>': undefined method `length'
for nil:NilClass (NoMethodError) from
../results/a/results/Stanislav_Valkanov_25_4482c1.rb:18:in `glob' from
../results/a/results/Stanislav_Valkanov_25_4482c1.rb:18:in `<main>' "
```

Soluton:

```
if (last.length == 5)&&(short_name.split("_").size == 3) =>
if last != nil && (last.length == 5)&&(short_name.split("_").size == 3)
```

Program rank: 4

Lubomir_Yankov_16_650c0b.rb

program code:

```
require 'csv'
def is_numeric(o)
  true if Integer(o) rescue false
end

array = []
count = 0

Dir.glob(ARGV[0] + "**").each do | file |
  ch_count = 0
  file_name = file.split("/").last.split("")

  file_name.each do | ch |

    if is_numeric(ch)

      ch_count += 1

    end

  end

  if ch_count == 9
    len = file_name.length
    array[count] = []
    array[count][0] = file_name
    array[count][1] = len/2.round
    count += 1
  end

end

array = array.sort_by { | el | el[0]}
CSV.open("results.csv", "w") do | csv |

  array.each do | element |

    csv << element

  end

end
```

Problems (Errors: 0):

Common error: "**results.csv**" => "**result.csv**"

file_name = file.split("/").last.split("") => file_name = file.split("/").last
file_name.each => file_name.each_char

Program rank: 4

Petko_Bozhinov_21_954dc6.rb

program code:

```
require 'csv'
```

```
class String
  def numeric?
    Float(self) != nil rescue false
  end
end
```

```
output = Array.new
i = 0
Dir.glob(ARGV[0] + "/*") do |file|
  file = file.split('/').last.split('.').first.split('_')
  Dir.glob(ARGV[1] + "/*") do |file2|
    file2 = file2.split('/').last.split('.').first.split('_')
    if "#{file[0]} #{file[1]}" == "#{file2[0]} #{file2[1]}"
      if file[2].numeric?
        if file[0].to_s.length == 5
          output[i] = Array.new
          output[i][0] = file[0]
          output[i][1] = file[1]
          i+=1
        end
      end
    end
  end
end
```

```
output = output.sort_by{ |element| element[1]}
CSV.open("result.csv", "w") do |csv|
  output.each do |pusher|
    csv << pusher
  end
end
```

Problems (Errors: 0)

Sort problem:

```
output = output.sort_by{ |element| element[1]} =>
output = output.sort_by{ |k, v| [v, k]}
```

Suggestions:

use hash.compare_by_identity so duplicate keys won't be discarded

Program rank: 5

Nikola_Marinov_20_add57e.rb

program code:

```
require 'csv'
def is_numeric(o)
  true if Integer(o) rescue false
end

array=[]

count=0
Dir.glob(ARGV[0] + "**/*.*").each do |file|

  full_name=file.split("/").last
  name = file.split("/").last.split(".").first_split("_")

  if name.length != 3 && !is_numeric(name[2])
    array(count) = []
    array(count) [0]=full_name
    array(count)[1]= full_name.to_s.length
    count += 1
  end
end

Dir.glob(ARGV[0] + "**/*.*").each do |file|

  full_name=file.split("/").last
  name = file.split("/").last.split(".").first_split("_")

  if name.length != 3 && !is_numeric(name[2])
    array(count) = []
    array(count) [0]=full_name
    array(count)[1]= full_name.to_s.length
    count += 1
  end
end
array = array.sort_by{|el| el[0]}

CSV.open("task.csv",w) do |csv|
  array=uniq.each do |element|
    csv << element
  end
end
```

Problems (Errors: 17):

Solution:

There is no quick solution.

Suggestions:

require 'ruby syntax'

Program rank: 1

Georgi_Ivanov_3_871529.rb:

program code:

```
require "csv"
```

```
arr = []
```

```
i = 0
```

```
Dir.glob(ARGV[0]+'*.rb') do |file|
  name = file.split('/').last.split('.').first.split('_')
  firstname = name[0]
  lastname = name[1]
  exercise = name[2]

  if firstname == " | | lastname == " | | exercise == "
    elsif name.length == 3

      if lastname.length == 5
        arr[i] = []
        arr[i][0] = name[0]
        arr[i][1] = name[1]
        i+=1
      end
    end
end
```

```
daiba = arr.sort_by{|asd| asd[0]}.reverse!
CSV.open("result.csv", "w") do |csv|
  daiba.each do |element|
    csv << element
  end
end
```

Problems (Errors: 0):

Programs is working...

Program rank: 5

Radoslav_Kostadinov_22_772118.rb

program code:

```
require 'csv'
file1 = Hash.new
file2 = Hash.new
```

```
path1 = ARGV[0]
path2 = ARGV[1]
```

```
Dir.glob("#{path1}*.rb") do |my_text_file|
  s = my_text_file.split(/\//).last.capitalize
  first_name = my_text_file.split("/").last.split("_").first
  last_name = my_text_file.split("/").last.split("_",2).last.split("_").first

  if s.count('_') == 2 and !((first_name == "" || first_name == "") ||
(last_name == "" || last_name == ""))
    file1[first_name] = last_name
  end
end
```

```
Dir.glob("#{path2}*.rb") do |my_text_file|
  s = my_text_file.split(/\//).last.capitalize
  first_name = my_text_file.split("/").last.split("_").first
  last_name = my_text_file.split("/").last.split("_",2).last.split("_").first

  if s.count('_') == 2 and !((first_name == "" || first_name == "") ||
(last_name == "" || last_name == ""))
    file2[first_name] = last_name
  end
end
```

```
CSV.open("result.csv", "w") do |csv|
  file1.sort.each do |first_name, last_name|
    file2.sort.each do |first_name1, last_name1|
      if first_name1 == first_name and last_name1 == last_name
        begin
          end
        else
          csv << [last_name1, first_name1]
        end
      end
    end
  end
end
end
```

Problems (Errors: 0):

Problem: wrong file checking algorithm

Solution:

Before:

```
CSV.open("result.csv", "w") do |csv|
  file1.sort.each do |first_name, last_name|
    file2.sort.each do |first_name1, last_name1|
      if first_name1 == first_name and last_name1 == last_name
        begin
          end
        else
          csv << [last_name1, first_name1]
        end
      end
    end
  end
end
end
```

After PIMPING:

```
CSV.open("result.csv", "w") do |csv|
  file1.sort.each do |first_name, last_name|
    flag = 0
    file2.sort.each do |first_name1, last_name1|
      if first_name1 == first_name and last_name1 == last_name
        flag = 1
        break
      end
    end
    if flag == 0
      csv << [first_name, last_name]
    end
  end
end
end
```

Program rank: 3

Simeon_Shopkin_23_56a835.rb

program code:

```
require 'csv'
```

```
arr = Array.new
```

```
  Dir.glob(ARGV[0]+"/*.rb") do |first_files|
```

```
    Dir.glob(ARGV[1]+"/*.rb") do |second_files|
```

```
      first_files = first_files.split("/").last.split(".").first.split("_")
```

```
      if first_files.size != 3
```

```
        if first_files != second_files
```

```
          print_count = first_files.split("/").last.split(".").first
```

```
          p = print_count.size.to_s
```

```
          print =
```

```
first_files[0].capitalize+"_"+first_files[1].capitalize+"_"+first_files[2]+","+p
```

```
          arr.push(print)
```

```
        end
```

```
      end
```

```
    end
```

```
  end
```

```
  CSV.open("result.csv","w") do |csv|
```

```
    arr.sort.each do |element|
```

```
      csv << [element]
```

```
    end
```

```
  end
```

Problems (Errors: 1):

Problem: Program doesn't match with the task's condition!

Solution: There is no quick solution.

Program rank: 1

Ivo_Valchev_11_6c8bd9.rb

program code:

```
hash_fold1={}
hash_fold2={}

Dir.glob("#{ARGV[0]}*.*") do |file|
  name = file.split("/").last.split(".").first.split("_")
  isNum = Integer(name[2]) rescue nil
  if name[0] and name[1] and name[0].length == 5 and !isNum!=nil
hash_fold1.include?(name[0])
    hash_fold1["#{name[1]}"] = "#{name[0]}"
  end
end
Dir.glob("#{ARGV[1]}*.*") do |file|
  name = file.split("/").last.split(".").first.split("_")
  isNum = Integer(name[2]) rescue nil
  if name[0] and name[1] and name[0].length == 5 and !isNum!=nil
and!hash_fold2.include?(name[0])
    hash_fold2["#{name[1]}"] = "#{name[0]}"
  end
end
File.open("result.csv", "w") do |csv|
  hash_fold1.sort.map do |key, value|
    if (hash_fold1[key]==hash_fold2[key])
      csv.puts("#{key},#{value}")
    end
  end
end
```

Programs (Errors: 0):

Problem with if conditions!

Solution:

```
!isNum!=nil hash_fold1.include?(name[0]) => delete
!isNum!=nil and!hash_fold2.include?(name[0]) => delete
```

Suggestions:

Do not use "!" for no reason!

Program rank: 2

Kristina_Pironkova_15_890ba0.rb

program code:

```
require 'csv'
results=Hash.new
Directory = ARGV[0]
Dir.glob("#{Directory}/*.rb") do |file_name|

    first_name = file_name.split("/").last.split("_").first.capitalize
    last_name=file_name.split("/").last.split("_",2).last.split("_").first.capitalize

    if first_name.length == 10

        results["#{last_name}"] = "#{first_name}"
    end

end

end

CSV.open("results.csv", "w") do |csv|
    results.sort.each do |first,last|

        csv << [last,first]

    end
end

Proglems (Errors: 0):
Common problem: "results.csv" => "result.csv"
Sorting problem:
    results.sort.each => results.sort_by{| key, val| val}.reverse.each
```

Program rank: 5

Hristo_Dachev_29_4a196f.rb

program code:

```
require 'csv'
```

```
hash = Hash.new
```

```
Dir.glob("#{ARGV[0]}*").each do |path|
  first_name = path.split("/").last.split("_").first
  last_name = path.split("/").last.split("_", 2).last.split("_").first
  digit = path.split("/").last.split("_", 2).last.split("_").last.split(".").first
  name = path.split("/").last
```

```
  if name.include? "_" then counter = name.count "_" end
```

```
  if (counter != 2) || (digit.to_i.to_s != digit)
```

```
    l = name.length
```

```
    hash[name] = l
```

```
  end
```

```
end
```

```
Dir.glob("#{ARGV[1]}*").each do |path|
```

```
  first_name = path.split("/").last.split("_").first
```

```
  last_name = path.split("/").last.split("_", 2).last.split("_").first
```

```
  digit = path.split("/").last.split("_", 2).last.split("_").last.split(".").first
```

```
  name = path.split("/").last
```

```
  if name.include? "_" then counter = name.count "_" end
```

```
  if (counter != 2) || (digit.to_i.to_s != digit)
```

```
    l = name.length
```

```
    hash[name] = l
```

```
  end
```

```
end
```

```
CSV.open("result.csv", "w") do |csv|
```

```
  hash.sort_by{ |k, v| v }.each do |name, length|
```

```
    csv << ["#{name}", "#{length}"]
```

```
  end
```

```
end
```

Problems (Erros: 0):

Program is working correctly!

Program rank: 5

Dimitar_Nestorov_7_0d5526.rb

program code:

```
require 'csv'
def is_numeric(o)
  true if Integer(o) rescue false
end
array = []
count = 0
Dir.glob(ARGV[0] + "/*.rb") do |file|
  name = file.split("/").last.split(".").first.split("_")

  name[0] = name[0].to_s
  name[0] = name[0].capitalize

  name[1] = name[1].to_s
  name[1] = name[1].capitalize

  if name.size == 3 && is_numeric(name[2])
    if name[1].length == 10

      array[count] = []
      array[count][0] = name[0].to_s
      array[count][1] = " #{name[1].to_s}"
      count += 1

    end
  end
end
array = array.sort_by {|el| -el[1]}
CSV.open("result.csv", "w") do |csv|
  array.uniq.each do |e|

    csv << e
  end
end
```

Problems (Errors: 1):

Error:

```
"Dimitar_Nestorov_7_0d5526.rb:42:in `block in <main>': undefined method `-@' for "
L10letter2":String (NoMethodError) from
../results/a/results/Dimitar_Nestorov_7_0d5526.rb:42:in `each' from
../results/a/results/Dimitar_Nestorov_7_0d5526.rb:42:in `sort_by' from
../results/a/results/Dimitar_Nestorov_7_0d5526.rb:42:in `<main>' "
```

Solution:

```
" #{name[1].to_s}" => " #{name[1].to_s}"
array = array.sort_by {|el| -el[1]} => array = array.sort_by {|el| el[1]} .reverse
```

Program rank: 4

Tihomir_Lidanski_27_dafd44.rb

program code:

```
require 'csv'
```

```
Dir.glob(ARGV[0] + ".*") do |file|  
  name = file.split("/").last.split(".")
```

```
Dir.glob(ARGV[1] + ".*") do |file|
```

```
puts name.length % 2.round()
```

```
end
```

```
end
```

```
CSV.open("result.csv", "w") do |csv|
```

```
end
```

Problems (Errors: undefined):

Problem: unfinished program!

Solution: There is no quick solution!

Program rank: 1

Kalin_Marinov_14_12_bce70c.rb

program code:

```
require 'csv'
```

```
hash = Hash.new
```

```
Dir.glob("#{ ARGV[0] }/*") do |name|  
  name = name.split("/").last  
  short_name = name.split('_')[1]  
  if short_name.length == 5  
    hash[name] = short_name  
  end  
end
```

```
CSV.open("result.csv", "w") do |csv|  
  hash = hash.sort_by { |key, value| value }.reverse  
  hash.each |key| do  
    csv << key  
  end  
end
```

Problems (Errors: 2):

Error:

```
"Kalin_Marinov_14_12_bce70c.rb:31: syntax error, unexpected keyword_do_block  
Kalin_Marinov_14_12_bce70c.rb:34: syntax error, unexpected keyword_end, expecting  
$end "
```

Common error:

```
"Kalin_Marinov_14_12_bce70c.rb:24:in `block in <main>': undefined method `length'  
for nil:NilClass (NoMethodError)  
  from Kalin_Marinov_14_12_bce70c.rb:21:in `glob'  
  from Kalin_Marinov_14_12_bce70c.rb:21:in `<main>' "
```

Solution:

```
if short_name.length == 5 => if short_name != nil and short_name.length == 5  
hash.each |key| do => hash.each do |key|  
hash[name] = short_name => hash[name.split('_').first] = short_name
```

Program rank: 3

Stanislav_Gospodinov_26_b36abb.rb

program code:

```
require 'csv'
hash = Hash.new

Dir.glob("#{ARGV[0]}*.rb") do |file|
  filename = file.split('/').last.split('.').first;
  if filename.split('_').length == 3
    if filename.split('_')[1].length == 5
      hash[filename.split('_')[0]] = filename.split('_')[1]
    end
  end
end

hash = Hash[hash.sort_by{|k, v| v}]

CSV.open("results.csv", "w") do |csv|
  hash.each do |key, value|
    csv << [key, value].flatten
  end
end
```

Problems (Errors: 0):

Common problem: No such file or directory - result.csv. No result.csv file was found.

Solution:

"results.csv" => "result.csv"

Program rank: 5

Borislav_Rusinov_2_6fb3ad.rb

program code:

```
a=ARGV[0]
require 'csv'
array=[]
Dir.glob("#{a}*.*)" do |my_text_file|
  name = my_text_file.split("/").last.split(".").first.split("_")
  if name[1]!=nil && name[0].length==10
    array << name[0] + "," + name[1]
  end
end
array.sort!
array.reverse!
File.open("results.csv", "w") do |csv|
  array.each do |arg|
    csv.puts(arg)
  end
end
```

Problems (Errors: 0):

Common problem: No such file or directory - result.csv. No result.csv file was found.

Solution:

"results.csv" => "result.csv"

Program rank: 5

Moretti_Georgiev_19_b7f153.rb

program code:

```
require 'csv'
```

```
student = Hash.new
```

```
Dir.glob("#{ARGV[0]}/*_*.rb") do |file|  
  firstName = file.split("/").last.split("_").first  
  lastName = file.split("/").last.split("_", 2).last.split("_").first  
  digit = file.split("/").last.split("_").last.split(".").first  
  if lastName.length == 10  
    student[firstName] = lastName  
  end  
end
```

```
CSV.open("result.csv", "w") do |csv_file|  
  student.sort.each do |key, value|  
    csv_file << ["#{key}", "#{value}"]  
  end  
end
```

Problems (Errors: 0):

Program is working correctly!

Program rank: 5

Momchil_Angelov_18_d8aa65.rb

program code:

```
require 'csv'
```

```
arr1=Array.new
```

```
arr2=Array.new
```

```
arr3=Array.new
```

```
a = ARGV[0]
```

```
b = ARGV[1]
```

```
i=0
```

```
Dir.glob(a + "/*.rb") do |my_text_file1|
```

```
  short= my_text_file1.split('/').last
```

```
  length1 = short.length
```

```
  shorter= short.split('.').first.split('_')
```

```
  first_name=shorter[0]
```

```
  last_name=shorter[1]
```

```
  digits=shorter[2].to_i
```

```
  if !first_name || !last_name || digits=0
```

```
    next
```

```
  else
```

```
    arr1 << ["#{short}" "#{length1}"]
```

```
  end
```

```
end
```

```
Dir.glob(b + "/*.rb") do |my_text_file2|
```

```
  short2= my_text_file2.split('/').last
```

```
  length2 = short2.length
```

```
  shorter2= short.split('.').first.split('_')
```

```
  first_name2=shorter2[0]
```

```
  last_name2=shorter2[1]
```

```
  digits2=shorter2[2].to_i
```

```
  if !first_name2 || !last_name2 || digits2=0
```

```
    next
```

```
  else
```

```
    arr2 << ["#{short2}" "#{length2}"]
```

```
  end
```

```
end
```

```
arr3 = arr1 & arr2
```

```
arr3 = arr3.sort_by {|el|
```

```
  el[1]
```

```
}
```

```
CSV.open("result.csv", "w") do |csv|
```

```
arr3.each do |element|
```

```
csv << element
```

```
end
```

```
end
```

Problems (Errors: 1):

Errors:

"Momchil_Angelov_18_d8aa65.rb:44:in `block in <main>': undefined local variable or method `short' for main:Object (NameError)

from Momchil_Angelov_18_d8aa65.rb:40:in `glob'

from Momchil_Angelov_18_d8aa65.rb:40:in `<main>' "

Solution (only for the error):

`shorter2= short.split('.').first.split('_') => shorter2= short2.split('.').first.split('_')`

Solution: There is no quick solution.

Program rank: 2

Kamena_Dacheva_13_0af18f.rb

program code:

```
student = Hash.new { | name, programs | name[programs] = [] }
directory = ARGV[0]
require "csv"

class String
  def is_number?
    Float(self) != nil rescue false
  end
end

Dir.glob("#{directory}/*.rb") do | my_repository |

  name_dir = my_repository.split("/").last

  name = name_dir.split("_").first.capitalize
  sir_name = name_dir.split("_", 2).last.split("_").first.capitalize
  program = name_dir.split("_").last.split(".").first
  ex = name_dir.split("_").last.split(":").last

  if name_dir.include? "_" then counter = name_dir.count "_" end
  student["#{name}"] << sir_name if ((counter == 2) && (sir_name.length == 5) &&
(program.is_number?) && (ex == "rb"))
end

CSV.open("result.csv", "w") do | csv |
  student.sort_by{ | k, v | v }.reverse.each do | f_name, l_name |
    csv << [f_name, l_name].flatten
  end
end

Problems (Errors: 0):
  Program is working correctly!

Program rank: 5
```

Stanimir_Bogdanov_24_ca514d.rb

program code:

```
require 'csv'
```

```
directory = ARGV[0]
```

```
students = Hash.new
```

```
Dir.glob("#{directory}*") do |filename|  
  unless (filename.split('/').last =~ /^[a-zA-Z0-9]+_[a-zA-Z0-9]+_[0-9]+.rb$/).nil?  
    first_name = filename.split('/').last.split('_')[0]  
    second_name = filename.split('/').last.split('_')[1]  
    students[first_name] = second_name if first_name.length == 10  
  end  
end
```

```
CSV.open("result.csv", "w") do |csv|  
  Hash[students.sort_by { |first, last| last }.reverse].each do |first, last|  
    csv << [ first, last ]  
    # puts "#{first},#{last}"  
  end  
end
```

Problems (Errors: 0):

Program is working correctly!

Program rank: 5

Veselin_Dechev_11A2_5f1c22.rb

program code:

```
a=ARGV[0]
require 'csv'
array=[]
Dir.glob("#{a}*.*)" do |my_text_file|
  name = my_text_file.split("/").last.split(".").first.split("_")
  if name[1]!=nil && name[0].length==10
    array << name[0] + "," + name[1]
  end
end
array.sort!
array.reverse!
File.open("results.csv", "w") do |csv|
  array.each do |arg|
    csv.puts(arg)
  end
end
```

Problems (Errors: undefined):

Unknown task's condition!

Program rank: 1

Dimitar_Terziev_6_88db52.rb

program code:

```
require 'csv'
arr = []
Dir.glob("#{ARGV[0]}*.rb*"){ | file |
  file_str = file.split('/').last
  if(file_str =~ /\A[a-zA-Z]+\_[a-zA-Z]+\_\d+\.rb\z/ && file_str.split('_')[1].size == 5)
    arr.push("#{file_str.split('_')[1]} #{file_str.split('_').first}")
  end
}
CSV.open('result.csv','w'){ | csv |
  arr.uniq.sort.each{ | el |
    csv << "#{el.split(' ').last} #{el.split(' ').first}".split(' ')
  }
}
```

Problems (Errors: 0):

Sort problem: Results should be sort by Lastname ASC.

Solution:

```
arr.uniq.sort.each => arr.uniq.sort_by{ | key, val | [val, key]}.each
```

Program rank: 5