Task5

Deadline: 16.11.2015 for 1EN04C and 1EN04A

Prepare your programs as separate scripts for each sub-problem.  
**All** your scripts **must** contain description about task and author (you) in comments.  
EXAMPLE:  
# STUDENT: Vasya Pupkin  
# GROUP: 1EN04X  
# TASK: Task5 problem A

# (50pt) Problem A [Telephone Book]

Create program that prints following menu*.* And have abilities to store and recall telephone numbers.  
When program is closed, data should be stored to some file *(use pickle module)*. So when it is opened again data will be there.  
Make this program robust. So that it will handle exceptions, and will not crash when wrong data is entered.

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| **console example** |

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| **Welcome to Telephone book!**  **Select one of the following: \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***  **1. Show all contacts 2. Insert new contact**  **3. Find contact**  **4.Exit**  **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***  **Your choice: 1**  **++++++++++++++++++++++++**  **Vasya Pupkin : 87001234567**  **Petr Hvost: 87019877623**  **Ivan Leniviy: 87771235823**  **That is all…**  **++++++++++++++++++++++++**  **Select one of the following:**  **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***  **1. Show all contacts 2. Insert new contact**  **3. Find contact**  **4. Exit**  **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***  **Your choice: 2**  **$$$$$$$$$$$$$$$$$$$$$$$$$**  **Enter contact name: John Great**  **Enter contact telephone: 87071572352**  **Your contact is saved…**  **$$$$$$$$$$$$$$$$$$$$$$$$**  **Select one of the following:**  **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***  **1. Show all contacts 2. Insert new contact**  **3. Find contact**  **4. Exit**  **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***  **Your choice: 3**  **#####################**  **Enter contact name: Vasya Following contacts have ‘Vasya’:**  **Vasya Pupkin : 87001234567**  **#####################**  **Select one of the following: \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***  **1. Show all contacts 2. Insert new contact**  **3. Find contact**  **4.Exit**  **\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***  **Your choice: 4**  **Good bye!** |

# (50 [80] pt) Problem B [MonkeyAndBananas]

Write program that do exactly what given compiled python file does.  
*[If you succeed to realize the extra information in brackets you get 80 points]*

***Hint: Be careful, check all possible combinations, your program must do exactly same performance.***

*In zip file there are [t5MonkeyAndBananas.pyc] and [run.py] files. If you execute* ***run.py*** *you will see following execution, from my implementation of this program. Play with it and do the same.*

Here result of sample execution:

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| **Console** |
| Welcome to Monkey and Bananas game!  Soon you will see banana tree. Monkey starts from top of the tree  and climb down and collects bananas. Your task is select such route  so Monkey will collect bananas as much as possible. Good Luck!  Enter size of Tree: 5  Banana Tree is following:  M  / \  4 4  / \ / \  2 5 7  / \ / \ / \  9 1 1 4  / \ / \ / \ / \  1 8 8 3 8  Enter L or R to select route:l  Monkey has 4 bananas![and maximum is 4]  M  / \  2 5  / \ / \  9 1 1  / \ / \ / \  1 8 8 3  Enter L or R to select route:r  Monkey has 9 bananas![but maximum is 11]  M  / \  1 1  / \ / \  8 8 3  Enter L or R to select route:l  Monkey has 10 bananas![but maximum is 15]  M  / \  8 8  Enter L or R to select route:l  Monkey has 18 bananas![but maximum is 23]  The End! Monkey has total 18 bananas! |

# (40pt) Problem C [Turtle]

Use **turtle** library to draw following figure. So create program that draw N stars in circle.  
Draw each star by different color, at least 9 different colors.  
*(condition: create function to draw star)*

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| **Console Sample** |  |
| **Enter N: 15** | **Enter N: 9** |