Conditional Statements

1.Welcome

A recently launched attraction at the "Events Square" entertainment fair is the "Carnival of Terror" which is an interactive fun zone featuring scary, horror and Halloween stories.

The Entry tickets for the show is to be printed with a Welcome message along with an additional message for Children stating they should be accompanied by an adult. Given the age of the person visiting the scary house, the ticket should carry the additional message only for Children whose age is less than 15 years. The show organizers wanted your help to accomplish this task. Write a program that will get age as the input and display the appropriate message on the tickets.

Input Format:
First line of the input is an integer that corresponds to the age of the person.

Output Format:
Output should display the additional message "Please note that you should be accompanied by an adult" for Children less than 15 years. Otherwise it should print only the Welcome message.
Refer sample input and output for formatting specifications.

Sample Input 1:
20

Sample Output 1:
Welcome to the show

Sample Input 2:
14

Sample Output 2:
Welcome to the show
Please note that you should be accompanied by an adult

2.Ticket type

"FantasyKingdom" is a brand new Amusement park that is going to be inaugurated shortly in the City and is promoted as the place for breath-taking charm. The theme park has more than 30 exhilarating and craziest rides and as a special feature of the park, the park Authorities has placed many Ticketing Kiosks at the entrance which would facilitate the public to purchase their entrance tickets and ride tickets.

The Entrance Tickets are to be issued typically based on age, as there are different fare for different age groups. There are 2 types of tickets – Child ticket and Adult ticket. If the age given is less than 15, then Child ticket is issued whereas for age greater than equal to 15, Adult ticket is issued. Write a piece of code to program this requirement in the ticketing kiosks.

Input Format:
First line of the input is an integer that corresponds to the age of the person.

Output Format:
Output should display "Child Ticket" or "Adult Ticket" based on the conditions given. Refer sample input and output for formatting specifications.

Sample Input 1:
20

Sample Output 1:
Adult Ticket

Sample Input 2:
12

Sample Output 2:
Child Ticket

3.Thrill ride

"Fantasy Kingdom" is a brand new Amusement park that is going to be inaugurated shortly in the City and is promoted as the place for breath-taking charm. The theme park has more than 30 exhilarating and thrilling rides and as a special feature of the park, the park Authorities have placed many Booking Kiosks at the entrance which would facilitate the public to purchase their entrance tickets and ride tickets.

There are few rides in the park which are not suitable for Children and aged people, hence the park Authorities wanted to program the kiosks to issue the tickets based on people's age. If the age given is less than 15 (Children) or greater than 60 (Aged), then the system should display as "Not Allowed", otherwise it should display as "Allowed". Write a block of code to help the Authorities program this functionality.

Input Format:
First line of the input is an integer that corresponds to the age of the person opting for the ride.

Output Format:
Output should display "Allowed" or "Not Allowed" based on the conditions given. Refer sample input and output for formatting specifications.

Sample Input 1:
20

Sample Output 1:
Allowed

Sample Input 2:
12

Sample Output 2:
Not Allowed

4.Lucky Winner

It was the inaugural ceremony of "Fantasy Kingdom" Amusement park and the park Management has announced some lucky prizes for the visitors on the first day. Based on this, the visitors whose ticket number has the last digit as 3 or 8, are declared as lucky winners and attracting prizes are awaiting to be presented for them.
Write a program to find if the last digit of the ticket number of visitors is 3 or 8.

Input Format:

First line of the input is an integer that corresponds to the ticket number.

Output Format:

Output should display as "Lucky Winner" if the last digit of the ticket number is 3 or 8. Otherwise print "Not a Lucky Winner".
Refer sample input and output for formatting specifications.

Sample Input 1:

43

Sample Output 1:

Lucky Winner

Sample Input 2:

41

Sample Output 2:

Not a Lucky Winner

5.Card Game

The Westland Game Fair is the premier event of its kind for kids interested in some intellectual and cognitive brain games. Alan, a middle school boy is visiting the fair where he is very much drawn by the Card game.

The game's rules are:
A player needs to pick 3 cards from a big lot of cards. There are 4 types of Cards namely Spade(S), Heart(H), Club(C) and Diamond (D). If all the 3 cards that the player picks are of the same type and same number, they get a Double Bonanza. If all the 3 cards are of the same type or if they all have the same number, they get a Bonanza. Otherwise they do not get a Bonanza. Alan has now picked 3 cards and is awaiting to know if he has got a bonanza. Please help him to know if he has won the Bonanza or not.

Input Format:

There are 3 lines of input.
Each of the line consists of character and integer input, which corresponds to the type of the card and the number in it that Alan picked. The type of card and the number are separated by a single space.

Output Format:

Output should display "Double Bonanza" or "Bonanza" or "No Bonanza" based on the conditions given.
Refer sample input and output for formatting specifications.

Sample Input 1:

S 5
S 5
S 5

Sample Output 1:

Double Bonanza

Sample Input 2:

S 6
S 5
H 5

Sample Output 2:

No Bonanza

6.Triangle Game

The Westland Game Fair is the premier event of its kind for kids interested in some intellectual and cognitive brain games. Exciting games were organized for kids between age group of 8 and 10. One such game was called the "Triangle game", where different number boards in the range 1 to 180 are available. Each kid needs to select three number boards, where the numbers on the boards correspond to the angles of a triangle.

If the angles selected by a kid forms a triangle, he/she would receive Prize 1. If the angles selected by a kid forms a right triangle, he/she would receive Prize 2. If the angles selected by the kids form an equilateral triangle, he/she would receive Prize 3. If the angles selected by a kid do not form even a triangle, then he/she will not receive any prizes. Write a program for the organizers to fetch the result based on the number boards selected by the kids.

Input Format:

There are 3 lines in the input, each of which corresponds to the numbers on the boards that the kids select.

Output Format:

Output should display "Prize 1" or "Prize 2" or "Prize 3" or "No Prize" based on the conditions given.
Refer sample input and output for formatting specifications.

Sample Input 1:

60
50
70

Sample Output 1:

Prize 1

Sample Input 2:

60
60
70

Sample Output 2:

No Prize

7.Ticket types

The Magic Castle, the home of the Academy of Magical Arts at California has organized the great 'WonderWorks Magic Show'. Renowned magicians were invited to mystify and thrill the crowd with their world's spectacular magic tricks. The Ticket booking for the show started 2 days prior and there were different types of tickets offered with different fare. The show organizers wanted to place a scanning machine at the entrance of the venue for scrutiny. The machine will take the input of a character denoting the various ticket types and displays the equivalent ticket type of the given character.

There are 5 types of tickets, each of which is denoted by a character (both upper case and lower case). Please find the equivalent strings for the characters.
E or e - Early Bird Ticket
D or d - Discount Ticket
V or v - VIP Ticket
S or s - Standard Ticket
C or c - Child Ticket
Write a piece of code for the scanning machine that will take the input of a character and print the equivalent string as given.

Note:
Refer to problem specifications.

Input Format:
The first line of the input is one of the character that denotes one of ticket types.

Output Format:
Output should display the equivalent ticket type of the character.
Refer sample input and output for formatting specifications.

Sample Input 1:
e

Sample Output 1:
Early Bird Ticket

Sample Input 2:
S

Sample Output 2:
Standard Ticket

8.Total Expenses

The much awaited event at the entertainment industry every year is the "Screen Awards". This year the event is going to be organized on December 25 to honour the Artists for their professional excellence in Cinema. The Organizers has this time decided to launch an online portal to facilitate easy booking of the Award show's tickets.

They specifically wanted to provide an option for bulk booking in the portal, wherein there are many discounts announced. Write a program to help the Organizers to create the portal as per the requirement given below.
Given the ticket cost as 'X'.
If the number of tickets purchased is less than 50, there is no discount.
If the number of tickets purchased is between 50 and 100 (both inclusive), then 10% discount is offered.
If the number of tickets purchased is between 101 and 200(both inclusive), 20% discount is offered.
If the number of tickets purchased is between 201 and 400(both inclusive), 30% discount is offered.
If the number of tickets purchased is between 401 and 500(both inclusive), 40% discount is offered.
If the number of tickets purchased is greater than 500, then 50% discount is offered.

Input Format:

First line of the input is an integer that corresponds to the cost of the ticket 'X'.
Second line of the input is an integer that corresponds to the number of tickets purchased.

Output Format:

Output should display a double value, which gives the total expenses in purchasing the tickets after discounts. Display the output correct to 2 decimal places.
Refer sample input and output for formatting specifications.

Sample Input 1:

100
5

Sample Output 1:

500.00

Sample Input 2:

100

300

Sample Output 2:
21000.00

9.Salary Computation

Danny has recently got his job offer as an Event Concept Creator at Sparsh Event Services. The Company has sent him a detailed salary structure with details of his basic salary, HRA and DA. The Company has promised to pay him as under:

If his basic salary is less than Rs. 15000, then HRA = 15% of basic salary and DA = 90% of basic salary.
If his basic salary is either equal to or above Rs. 15000, then HRA = Rs. 5000 and DA = 98% of basic salary.

If the Danny's salary is given as input, write a program to find his gross salary.

Note : Gross Salary = Basic Salary+HRA+DA

Input Format:
First line of the input is an integer that corresponds to the basic salary of Danny.

Output Format:
Output should display the double value that refers to the gross salary of Danny. Display the output correct to 2 decimal places.
Refer sample input and output for formatting specifications.

Sample Input 1:
12000

Sample Output 1:
24600.00

Sample Input 2:
30000

Sample Output 2:
64400.00

10.Grades of Rides

“AquaticaCarnival” is the most successful event dedicated to children and families. The Event has more than 20 rides for children and adults and the organizers always ensure not to compromise on the safety of the visitors.
To ensure the safety of the rides, the organizers have graded the rides in the fair according to the following conditions:
Hurl Factor must be greater than 50.
Spin Factor must be greater than 60.
Speed factor must be greater than 100.

The grades are as follows:
Grade is 10 if all three conditions are met.
Grade is 9 if conditions (i) and (ii) are met.
Grade is 8 if conditions (ii) and (iii) are met.
Grade is 7 if conditions (i) and (iii) are met.
Garde is 6 if only one condition is met.
Grade is 5 if none of three conditions are met.
Write a program display the grade of the rides, given the values of hurl factor, spin factor and speed factor of the ride under consideration.

Input Format:
First line of the input consists of 3 integers that gives the Hurl Factor, Spin Factor and Speed Factor of the ride, each separated by a space.

Output Format:
Output should display the grade of the ride depending on Conditions.
Refer sample input and output for formatting specifications.

Sample Input 1:
51 89 150

Sample Output 1:
10

Sample Input 2:
45 69 102

Sample Output 2:
8

11.Minimum and Maximum

The ExConFair is the region's largest trade fair on Construction Equipments & Technology. The Event organizers hired college students as volunteers to work at the fair as the event is targeted to be attended by approx. 30 million visitors.

At the Office in the fair, there are two guards who count how many times a volunteer enters into the fair ground. Though the duty of a guard is 24 hour in a day, but sometimes they fall asleep during their duty and could not track the entry of volunteers in the fair ground. But one better thing is that they never fall asleep at the same time. At least one of them remains awake and counts who enters into the office. Now the Event Head wants to calculate how many times a volunteer has entered into the fair ground. He asked to the guard and they give him two integers A and B, count of first guard and second guard respectively.
Help the Event Head to count the minimum and maximum number of times a volunteer could have entered into the fair ground.

Input Format:
First line of the input consists of two integers that correspond respectively to A and B.

Output Format:
Output a single line containing two space separated integers, the minimum and maximum number of times a volunteer could have entered into the fair ground.
Refer sample input and output for formatting specifications.

Sample Input 1:
19 17

Sample Output 1:
19 36

Sample Input 2:
30 40

Sample Output 2:
40 70

12.Transceiver Communication

The ExCon Fair is the region's largest trade fair on Construction Equipments & Technology. The Event is targeted to be attended by approx. 30 million visitors. To ensure the smooth functioning of the event and the safety of the visitors, the Event Coordinator, Security Chief and Crowd Control Chief were instructed to carry two-way transceivers so they can stay in constant contact. Of course, these transceivers have a limited range so if two are too far apart, they cannot communicate directly.

The Event Coordinator invested in top-of-the-line transceivers which have a few advanced features. One is that even if two people cannot talk directly because they are out of range, if there is another transceiver that is close enough to both, then the two transceivers can still communicate with each other using the third transceiver as an intermediate device.

There has been a minor emergency at the Event and the Event Coordinator needs to communicate with both the Security Chief and Crowd Control Chief right away. Help the Event Coordinator determine if it is possible for all three people to communicate with each other, even if two must communicate through the third because they are too far apart.

Input Format:

The first line of the input contains a positive integer R ≤ 1,000 indicating that two transceivers can communicate directly without an intermediate transceiver if they are at most R meters away from each other.
The remaining three lines of the input describe the current locations of the the Event Coordinator, Security Chief and Crowd Control Chief, respectively. Each such line contains two integers X,Y (at most 10,000 in absolute value) indicating that the respective person is located at position X,Y.

Output Format:

Output a single line containing a single string. If it is possible for all three to communicate then you should output "Yes". Otherwise, you should output "No".
To be clear, we say that two transceivers are close enough to communicate directly if the length of the straight line connecting their X,Y coordinates is at most R.
Refer to sample input and output for formatting specifications.

Sample Input 1:	**Sample Input 2:**
1 0 1 0 0	2 0 0 0 2

1 0

2 1

Sample Output 1:
Yes

Sample Output 2:
No

13.Calendar Quiz

Super Quiz Bee is a famous quiz Competition that tests students on a wide variety of academic subjects. This week's participants were kids of age 12 to 15 and the quiz questions were based on Gregorian calendar.

In the first round of the competition, the Host of the event told the participants that it was Monday on the date 01/01/2001. Later he questioned each one of the participant what would be the day on the 1st January, giving them a particular year. Write a program to help the Host validate the answers given by the participants.

Input Format:
The first line contains an integer that corresponds to a year.

Output Format:
Output the day on the 1st January of that given year.
Refer sample input and output for formatting specifications.

Sample Input 1:
1994

Sample Output 1:
Saturday

Sample Input 2:
2014

Sample Output 2:
Wednesday

14.Chocolate Game

It was Christmas Eve and the celebrations remembering the birth of Jesus were going on in full swing at the Catheral Chapel. The Event Management Team had arranged for some exciting games after the mass worship and feast, where adults and kids of all ages participated very actively. "Chocolate Game" was organized for the kids which involved a standard chocolate of **n** by **m** pieces. More formally, chocolate is a rectangular plate consisting of n rows and m columns.
Two kids at a moment will play with the chocolate. First kid takes the chocolate and cuts it into two parts by making either a horizontal or vertical cut. Then, the second kid takes one of the available pieces and divides into two parts by either making a horizontal or vertical cut. Then the turn of first kid comes and he can pick any block of the available chocolates and do the same thing again. The player who cannot make a turn loses.
Write a program to find which of the kids will win if both of them play optimally.
Output "Yes", if the kid who plays first will win, otherwise print "No".

Input Format:
The only line of the input contains two space separated integers n and m - the sizes of the chocolate.

Output Format:
Output a single line containing one word "Yes" (without quotes) if there is a sequence of moves leading to the winning of the person who moves first and "No" (without quotes) otherwise.
Refer sample input and output for formatting specifications.

Sample Input 1:
1 2

Sample Output 1:
Yes

Sample Input 2:
1 3

Sample Output 2:
No

15.Help Lost Child

Harry, a little boy was accompanied by his Dad to visit the "Aquatica Carnival". The event saw a large crowd and the Security Chiefs found it hard to control them. Very regretfully, Harry got lost and was seen extremely worried. He wanted to reach back home as soon as possible. He was standing currently at coordinates (x1, y1) in 2-D plane. His home is at coordinates (x2, y2).

Please help him by giving a command by telling the direction in which he should go, so as to reach his home. If you give him a direction, he will keep moving in that direction till he reaches home. There are four possible directions you can give as command - "left", "right", "up", "down". It might be possible that you can't instruct Harry in such a way that he reaches his home. In that case, display the output as "sad".

Input Format:

First line of the input contains four space separated integers x1, y1, x2, y2.

Output Format:

Output a single line containing "left" or "right" or "up" or "down" or "sad" (without quotes).
Refer sample input and output for formatting specifications.

Sample Input 1:

0 0 1 0

Sample Output 1:

right

Sample Input 2:

0 0 1 1

Sample Output 2:

sad

16.Co-Partners in Train

Tim and Bob are off to a famous Education Fair "Knowledge Forum 2017" at Uzhlanda. This time they have to travel without their guardians. Tim got very interested in the arrangement of seats inside the train coach.
The entire coach could be viewed as an arrangement of consecutive blocks of size 8.

BerthNumber	Compartment
1-8	1
9-16	2
17-24	3
... and so on	

Each of these size-8 blocks are further arranged as:

1LB, 2MB, 3UB, 4LB, 5MB, 6UB, 7SL, 8SU
9LB, 10MB, ...
.....
.....

Here LB denotes lower berth, MB middle berth and UB upper berth.

The following berths are called Co-Partners in Train:

3 UB	6 UB
2 MB	5 MB
1 LB	4 LB
7 SL	8 SU

and the pattern is repeated for every set of 8 berths.
Tim and Bob are playing this game of finding the co-partner in train of each berth. Write a program to do the same.

Input Format:

The input consists of an integer N, which corresponds to the berth number whose neighbor is to be found out.

Output Format:

The output is to display the berth of the neighbor of the corresponding seat.
Refer sample input and output for formatting specifications.

Sample Input 1: **Sample Input 2:**

1

Sample Output 1:
4LB

5

Sample Output 2:
2MB

17.Hanging Bridge

At the annual "KrackerJack Karnival", there was a newest attraction ever in the City, the "Hanging Bridge". Visitors will be able to walk 200ft on the bridge, hanging around 50ft above the ground, and enjoy a wide-angle view of the breathtaking greenery.
The Hanging Bridge was inaugurated successfully in co-ordination with the Event Manager Rahul. There is a limit on the maximum number of people on the bridge and Rahul has to now ensure the count of people on the bridge currently should not exceed the limit. He then approximately estimated that **C** adults and **D** kids who came to the show, were on the hanging bridge. He also noticed that there are **L** legs of the people touching the bridge.
Rahul knows that kids love to ride on the adults and they might ride on the adults, and their legs won't touch the ground and hence he would miss counting their legs. Also Rahul knew that the adults would be strong enough to ride at max two kids on their back.
Rahul is now wondering whether he counted the legs properly or not. Specifically, he is wondering is there some possibility of his counting being correct. Please help Rahul in finding it.

Input Format:

The only line of input contains three space separated integers **C, D, L** denoting number of the adults, number of the kids and number of legs of people counted by Rahul, respectively.

Output Format:

Output a single line containing a string "yes" or "no" (both without quotes) according to the situation.
Refer sample input and output for formatting specifications.

Sample Input 1:

1 1 4

Sample Output 1:

yes

Sample Input 2:

2 4 16

Sample Output 2:

no

18.Minimum Travel Time

The renowned book fair of the season "Publishers Federation Book Expo" is back, it promises to be bigger and better with a spread of about a million books on display. It is organized in a wide space this year on the topmost floor **N** of Hotel Grand Regency.

Williams, an ardent book lover visits the fair and wants to minimize the time it takes him to go from the N-th floor to ground floor. He can either take the elevator or the stairs.
The stairs are at an angle of 45 degrees and Williams's velocity is V1 m/s when taking the stairs down. The elevator on the other hand moves with a velocity V2 m/s. Whenever an elevator is called, it always starts from ground floor and goes to N-th floor where it collects Williams (collecting takes no time), it then makes its way down to the ground floor with Williams in it.
The elevator cross a total distance equal to N meters when going from N-th floor to ground floor or vice versa, while the length of the stairs is sqrt(2) * N because the stairs is at angle 45 degrees. Williams has requested your help to decide whether he should use stairs or the elevator to minimize his travel time. Can you help him out?

Input Format:
First line of the input contains three space-separated integers N, V1, V2.

Output Format:
Output a single line with string Elevator or Stairs, denoting the answer to the problem.
Refer sample input and output for formatting specifications**.**

Sample Input 1:
5 10 15

Sample Output 1:
Elevator

Sample Input 2:
2 10 14

Sample Output 2:
Stairs

19.Aayush's Scholarship

Aayush studies in Teswan National University. Now is the time for exam results. Aayush similar to other students, hopes that his scores in 5 subjects in the exam could fetch him a scholarship for his GRE preparation.

The following simple rules are used to find whether he is eligible to receive scholarship:

- University follows **5** point grading system. In an exam, a student can receive any score from 2 to 5. 2 is called an F grade, meaning that student has failed that exam.
- Student should not have fail any of the exams.
- Student must obtain a full score in some of his/her exams to show that he/she is excellent in some of the subjects.
- He/She must have a grade point average not less than **4.0**

You are given information regarding how Aayush performed in those 5 subjects . Help him determine whether he will receive the scholarship or not.

Input Format:

The input contains 5 space separated integers denoting Aayush's 5 subjects score in the exam.

Output Format:

Output a single line - `"Yes"` (without quotes) if Aayush will receive scholarship, or `"No"` (without quotes) otherwise.
Refer sample input and output for formatting specifications.

Sample Input 1:

3 5 4 4 3

Sample Output 1:

No

Sample Input 2:

3 4 4 4 5

Sample Output 2:

Yes

20.Daily Routine

Brendon is a little techno-whiz whose IQ is out of the charts. He has set up a laboratory at home for his research and development and was once approached by an Event Management firm to design them a Robot that would log all the activities carried out in an event at various instants during the day. This would help them keep a track and in smooth functioning of events.
Brendon, after long days of hard work designed one such Robot but wanted to test it on his own daily routines. His daily routine is very simple, he starts his day working in a computer, then he eats food and finally proceeds for sleeping thus ending his day. He has programmed his Robot to log the activities of him at various instants during the day.
Today it recorded activities that Brendon was doing at N different instants. These instances are recorded in chronological order (in increasing order of time). This log is provided to you in form of a string s of length N, consisting of characters 'C', 'E' and 'S'. If s[i] = 'C', then it means that at the i-th instant Brendon was working in Computer, 'E' denoting he was eating and 'S' means he was sleeping.
Write a program to tell whether the record log made by the robot could possibly be correct or not.

Input Format:
The only line of input contains the string **s**.

Output Format:
Output a single line containing "yes" or "no" (without quotes) accordingly.
Refer sample input and output for formatting specifications**.**

Sample Input 1:
CES

Sample Output 1:
yes

Sample Input 2:
SCCC

Sample Output 2:
no