

Started on	Friday, 24 January 2020, 7:18 PM
State	Finished
Completed on	Friday, 24 January 2020, 7:34 PM
Time taken	16 mins 17 secs
Marks	7.00/7.00
Grade	100.00 out of 100.00
Feedback	Congratulations !!! You have passed by securing more than 80%

## Question 1

Correct

Mark 1.00  
out of 1.00 Flag  
question

Order the given Cohesion starting from worst to best and coupling from highest to lowest

Cohesion	Coupling
Co-incidental	Content
Logical	Common
Temporal	Control
Procedural	Stamp
Communicational	Data
Sequential	
Functional	

## Question 2

Correct

Mark 1.00  
out of 1.00

In FUN Mall, Mirchi FM has arranged for a thriller game. Mr.Stev who is the organizer for this event, calls one of the participant and ask him to pick a number. If the participant picks positive number he has to enter into angel house or if he picks zero or negative number he has to enter into ghost house. Write a program to display to which house the participant has to be entered.

Given the following algorithm ,order the same in the correct sequence.

## Quiz navigation

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## For Practice Only

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Flag  
question

- ✓ Start
- ✓ Get a number from the user
- ✓ Check if the number is greater than 0
- ✓ If greater then
- ✓ Print "Enter the Angel House"
- ✓ Else if lesser then
- ✓ Print "Enter the Ghost house"
- ✓ End

Your answer is correct.

### Question 3

Correct

Mark 1.00  
out of 1.00

Flag  
question

g r l d h c o a y n s p u t w i m f

Complete the crossword

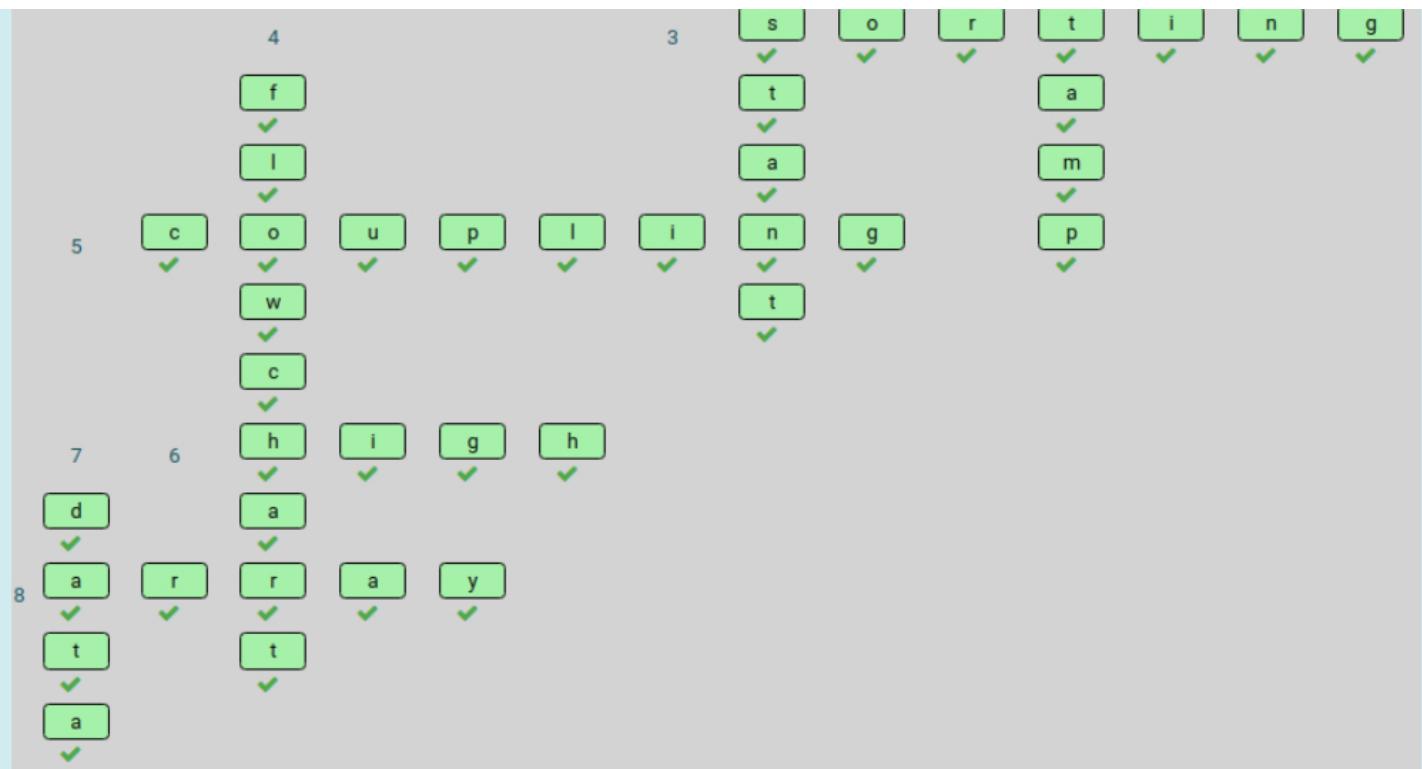
#### Across

3. Process of placing elements from a collection in some kind of order
5. Measure of the degree of interdependence between modules
6. Software engineer must design the modules with \_\_\_\_\_ cohesion
8. Variable which is used to store large amount of data

#### Down

1. Entity whose value does not change
2. Complete data structure is passed from one module to another
4. Diagrammatic representation of algorithm
7. Best type of module coupling





## Question 4

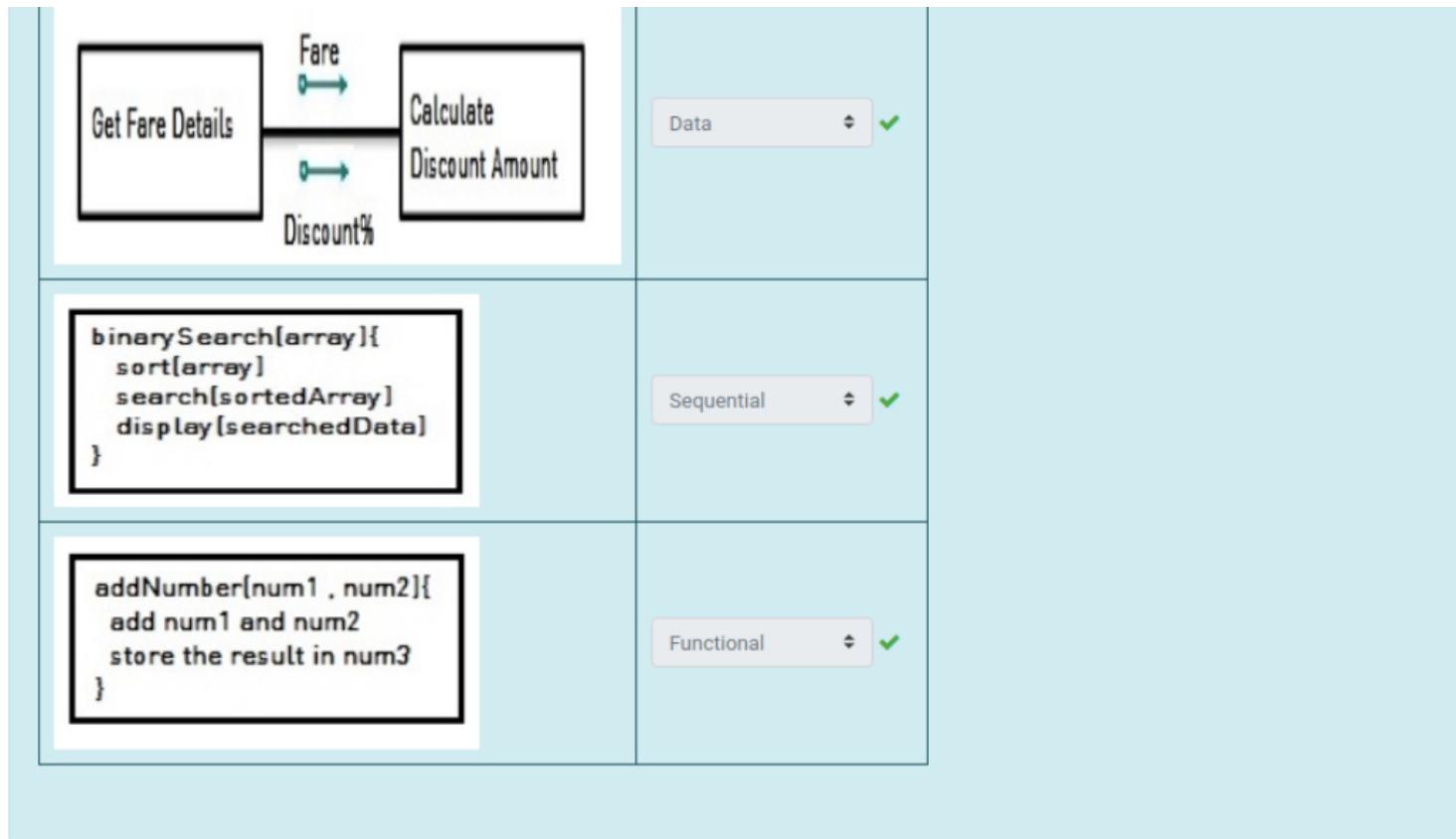
Correct

Mark 1.00  
out of 1.00

Flag  
question

Drag and drop the correct Coupling and Cohesion

<pre>processProjectDetails[projectid]{      getClientDetails[projectid]     getEstimatedCost[projectid]     getAllocationDetails[projectid] }</pre>	<p>Communicational ✓</p>
<pre>main(){     get choice     addAccount[choice] }  choice</pre>	<pre>addAccount[choice]{     if choice is 1         add to savings account     else if choice is 2         add to current account     else         add to recurring account }</pre> <p>Control ✓</p>



## Question 5

Correct

Mark 1.00  
out of 1.00

Flag question

Drag And Drop the text to get correct algorithm for the below Scenario

Ninu wants to teach her 5 years old daughter about the seasons and the months. If Ninu tells the name of the month her daughter has to tell the respective season for the month.

**Hint**

Summer -March,April,May

Winter-December January February

Autumn – September October November

Spring – June July August

### Algorithm for the Scenerio

Start

Enter the  name of the month  to be checked

If  the  name of the month  is March or April or May then

Print   "Summer"

```

else if      ✓ the name of the month ✓ is December or January or February
Print        ✓ "Winter"
else if      ✓ the name of the month ✓ is September or October or November
Print        ✓ "Autumn"
Else          ✓
Print        ✓ "Spring"
end

```

## Question 6

Correct

Mark 1.00  
out of 1.00

Flag  
question

Order the sequence to get the correct algorithm for the below given scenario

A famous music director is now composing a pop album. To speed up his composition of generating unpredictable rhythms, he wants the list of prime numbers available in a range of numbers.

Can you help him out?

✓ Read the values for N and M

✓ While N is smaller than M

Initialize I to 2

✓ While I is smaller than N

✓ If N is divisible by I

Skip loop

✓ Increment I

✓ If N is equal to I

Print N

✓ Increment N

Your answer is correct.

## Question 7

Correct  
Mark 1.00  
out of 1.00

Flag  
question

Generate the correct algorithm for the given scenario

National Highways Department announces a scheme for four wheeler in toll gate for 50th year celebration. If the vehicle number is divisible by both 7 and 3 that will move on for free of cost. if the vehicle number id divisible by 7 or 3 then they should pay half of the fee. Otherwise You have to pay.

start

read the vehicle\_number

```
if vehicle_number % 7 == 0 and vehicle_number % 3 == 0 then
    print " Need not pay. Enjoy driving "
else if vehicle_number % 7 == 0 or vehicle_number % 3 == 0 then
    print " Pay half the toll gate fee "
else
    print " Pay for toll gate "
end
```

## Question 8

Not  
answered

Not graded

Flag  
question

"Brain Storm" a popular matriculation school in your place is conducting a science exhibition. Alex needs your help to present his project named as "Simple Calculator". Help him to write an algorithm to create a simple calculator that performs basic arithmetic operations (add, subtract, multiply and divide).

## Question 9

Not  
answered

Not graded

Flag  
question

Tony crosses a street that is 'x' m long in 'y' minutes. Write an algorithm to compute his speed in km per hour, given x and y.

Hint: speed=distance/time

## Question 10

Not

Mrs. Jessy teaches her 7-year-old daughter to tell the day of a week when Jessy tells a number between 1 to 7. Implement this scenario and generate an algorithm for the same.

answered

Not graded

Flag  
question

## Question 11

Not  
answered

Not graded

Flag  
question

Raj wants to convert binary number to decimal number system. Binary number system is a base 2 number system. It uses only 2 symbols to represent all its numbers i.e. 0 and 1. Build an algorithm for this conversion.

## Question 12

Not  
answered

Not graded

Flag  
question

The first two terms in the Fibonacci series are 0 and 1, respectively, and each subsequent term is the sum of the previous two. Using this definition, to calculate the first several terms in the sequence, we get:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...

Build an algorithm for the same.

## Question 13

Not  
answered

Not graded

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question

Factorial of any number n is represented by  $n!$  and is equal to  $1*2*3*....*(n-1)*n$ .

Write an algorithm to find the factorial of any given number.

## Question 14

Not  
answered

A three digit number is called an Armstrong number if the sum of the cube of its digits is equal to the number itself. Write an algorithm for the same.

Not graded

Flag question

## Question 15

Not answered

Not graded

Flag question

A passport office at Gurgaon decides to generate a Unicode for every applicant who applies for passport and to mail the same to the applicants. The passport service will get rendered only when an applicant provides his own Unicode number that was sent to him. The Unicode is generated in a tricky way. It is the year of birth of the applicant summed up followed by the area code reversed.

Year entered must contain four digits; otherwise display – ‘Unable to generate Unicode’. If the year entered is greater than the current year or less than or equal to zero, display the message – ‘Unable to generate Unicode’. If the area code entered is less than or equal to zero, display the message – ‘Invalid area code’.

Build an algorithm for the same.

## Question 16

Not answered

Not graded

Flag question

A grocery shop gives discount of 10% on a particular product if the cost of the quantity purchased crosses 1000. The price of one piece of this product is Rs. 100. Write an algorithm to calculate the price a person will have to pay, given the quantity he purchased.

## Question 17

Not answered

Not graded

Flag question

A computer teacher wants his students to find the number of days in the month of February depending on whether it is a leap year or not. Build an algorithm for the same.

## Question 18

To decide on an employee's work allotment, the manager asks for his/her age, sex (M or F), marital status (Y or N). He then applies the following rules to decide on their place of service:

Not  
answered  
Not graded  
Flag  
question

If the employee is a female and is married, then she will work in urban areas.  
If the employee is a male, married and if the age is between 20 and 40, then he could be put to work anywhere.  
If employee is a male, unmarried and if the age is between 40 and 60, then he will work in urban areas.  
Write an algorithm for the same.

## Question 19

Not  
answered  
Not graded  
Flag  
question

Jane and James are friends and both are really interested in learning new aspects and new things in a programming language. One day, they planned to find out the best algorithm to count the frequency of each digit in any given number. Help them find out the best algorithm to do the same.

## Question 20

Not  
answered  
Not graded  
Flag  
question

If a factor of a number is a prime number then it is its prime factor. Write an algorithm to find the prime factor of a number.

## Question 21

Not  
answered  
Not graded  
Flag  
question

IMBC HR management has planned to implement a web based leave management system for their employees. All full-time employees shall receive 17 days of personal leave for a year, along with the leave balance of the previous year.

Assume (N) is the leave balance of the previous year and update the total number of leave days received by an employee for the current year. The algorithm should ask a user to type an integer (N) between 0 and 20 (both included) so that he would obtain N+17 as his output. On typing a wrong integer, he must be asked to type a right one. This must continue until the user types in the right input. Once a right integer is typed, then N+17 would get processed.

## Question 22

Mr.William buys a new Audi car. During the vehicle registration, he needs a fancy number like both the number and its reverse are the same. Generate an algorithm to find that fancy number.

Not  
answered

Not graded

Flag  
question

## Question 23

JeanStone an online shopping portal introduces jeans for women. Assume 10 model pictures are given with different sizes. Write an algorithm to arrange them in the catalog, based on their size from big to small.

Not  
answered

Not graded

Flag  
question

## Question 24

A private bank comes up with a requirement to check the age of a person who wants to open an account in their bank. They approach you to create an algorithm to calculate the age when the birth year and the current year are given. Both the years should be encoded with last two digits.

For example, if the birth year is 1990, then the user will enter only "90". You will have to determine, if a two digit value such as "62" corresponds to a year in the 20th century ("1962"). If the user gives "00", this will be considered as year 2000. Assume that the age should always between 18 and 100 (inclusive) and the current year to be 2018.

Not  
answered

Not graded

Flag  
question

## Question 25

A big state level tournament is coming up. A sports academy is preparing their students for the same and has formed two groups, namely Group A and Group B. Each group contains 6 players. Both the teams are said to be compatible if they are of the same size and if the player in  $i^{\text{th}}$  position in group A is greater than the player in  $i^{\text{th}}$  position in group B, for all  $i$ . Write an algorithm for the same.

Not  
answered

Not graded

Flag  
question

## Question 26

Not answered

Not graded

Flag question

A grand discount sale is announced by 3 vendors - Flipkart, Amazon and Snapdeal for the products - mobile, laptop, speakers, power bank and USB. Ms. Grace wants to identify which vendor supplies each product for the least price. For example, if a laptop is sold for 45000, 42000, and 46000 by the three vendors, then she must be able to identify that the laptop from Amazon has the least price of Rs.42000. This has to be done for all the 5 products. Help Grace with an algorithm that displays the least price of each product along with the vendor that sells it. The flow has to terminate abruptly displaying – 'Invalid Input', if a price entered is negative.

## Question 27

Not answered

Not graded

Flag question

The captain of the ship INS Chakra wants to select someone from his crew for help. Everyone seems eligible and so he decides to test their intelligence with a game and pick the one that wins. The members will have to stand in a line and they will be numbered in the order in which they stand, starting from 1. The point is - in his first pass, the captain will remove all the members standing in the odd position. This process of removal will continue for several passes until there is just one person left. The captain gives them just 30 seconds to line up. Imagine yourself to be a crew member and design an algorithm that will help you choose the perfect place to stand in the line so that you win!

Hints :

Members are numbered in the order - 1,2,3,4,5,6,7,8

After the first pass, members in these positions are safe - 2,4,6,8

After the second pass, members in these positions are safe - 4,8

The winner is at the position - 8 !

## Question 28

Not answered

Not graded

Flag question

You are the class representative and your class adviser wants you to prepare the result analysis after every internal assessment. Given the scores of 'N' students in the class for 6 courses, one of the tasks in the analysis is to find the maximum mark scored in each course. Write an algorithm for the same. Marks cannot be negative or greater than 100. On such erroneous input, stop the flow deliberately displaying – 'Invalid input'.

## Question 29

Not answered

Not graded

Flag question

As a result of the final year on-campus, Tekno School of Computing wants to select the students, who have performed well in the interview. The report given is in the matrix format. Now nominees for the post "placement coordinators" are to be selected. The students with highest interview score is the one to be nominated. The total number of inputs can be calculated using  $(m \times n + 2)$ . The first input integer corresponds to m, the number of rows in the matrix( i.e. number of students) and the second integer corresponds to n, the number of columns(number of interview rounds). The remaining integers correspond to the elements in the matrix. The elements are read in row wise order, first row first, then second row and so on. Assume that the maximum value of m and n to be 10.

For ex: Consider in a 3x3 matrix, 9 values to be filled.

**question**

	round1	round2	round3
student1	1	4	5
student2	6	4	1
student3	2	4	3

For this scenario, the total number of inputs is 11 calculated using formula( $m \times n + 2$ ). Here,  $((3 \times 3 + 2) = 11)$ . The input integers are 3,3,1,4,5,6,4,1,2,4,3. Here, first integer represents 3 rows, second integer represents 3 columns, the remaining integers are scores. (highest scores values can be calculated as follows  $(1+4+5)$ ,  $(6+4+1)$ ,  $(2+4+3)$ ). Here, The nominee with highest score 11 is student 2). If two or more students with same score, then they can be the nominated. Write a Pseudo code for this scenario.

**Question  
30**Not  
answered

Not graded

 Flag  
question

In a class room, students are seated in the form of a square matrix of order  $n \times n$ . A nominee for the post of class representative is to be selected from each row. The student with the highest mark in each row is the one nominated from that row. Given the marks of the students in the row wise order of their seating, can you write an algorithm that displays the positions of the nominees in each row?

**Question  
31**Not  
answered

Not graded

 Flag  
question

A matrix is said to be row dominant if the sum of the elements along any row in the matrix is greater than the sum of the elements along every column in the matrix. Write an algorithm to determine whether the given matrix is row dominant or not.

**Question  
32**Not  
answered

Not graded

 Flag  
question

A new employee has joined a company. He is allocated projects during his probation. He is given a score for each project he finishes. Assume that the number of projects will not exceed 10. The project manager who is notified every project score, checks for the average of scores. If the average is above 80 he is allocated with the real project, else he is given more assignments. Write an algorithm for the same.

## Question 33

Not  
answered

Not graded

Flag  
question

A parade is arranged for Independence Day celebrations in your campus. A line of students are arranged in odd and even positions. Now the students in the odd positions are to be sorted in the descending order and the students in the even position are to be sorted in ascending order, given a 1 D array. The maximum length of the line is 20. Display – 'Invalid Size', if the input specified is zero or negative.

Write an algorithm to implement the above scenario.

## Question 34

Not  
answered

Not graded

Flag  
question

George is given a task by his mathematics professor. His task is to merge 2 arrays and get the result sorted in ascending order. The sorted array must not contain duplicates. Write an algorithm for the same.

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