

## PHP General Test



Name : Nicolaus Euclides Wahyu Nugroho

Date : November, 26th 2018

Please answer in English!

Time Allowed: 120

minutes

### Section 1 - Logic

A) Using as close as possible to 3 lines of typed text or 5 lines of handwritten text, but no more, describe the room you are currently sitting in.

Answer :

1. I sitting in a room with enough light to work.
2. Everyday when I enter this room I feel like I can pour out all my feelings.
3. This room also make me feel better when I have to working.

B) Using as close as possible to 3 lines of typed text or 5 lines of handwritten text, but no more, describe the business you last worked in.

Answer :

1. Business that helps online sellers and offline sellers to manage their stocks
2. Business that making

C) Paper is to wood as hammer is to

- ☐ Wool
- ☐ Nail

☐ Metal

☐ Saw

D) Chinese is to Asian as Italian is to

☐ City

☐ African

☐ Country

☒ European

E) Library is to book, as book is to

☒ Page

☐ Words

☐ Story

☐ Language

F) What is the number that is one half of one quarter of one tenth of 400 ? [The number is 5](#)

G) Which number should come next in this series: 13, 57, 911, 1315, 1719 ?

☐ 1779

☐ 1851

☐ 2123

☒ 4281

H) The sum of all numbers from 1 to 11 is

☐ Odd

☒ Even

☐ Prime

☐ Negative

## Section 2 - PHP

A) Please create code to produce the following output which takes parameter  $n$ .

Example for  $n = 9$ :

123456789  
234567891  
345678912  
456789123  
567891234  
678912345  
789123456  
891234567  
912345678

Answer :

```
<?php %n = 9;

for (%i = 1; %i <= %n; %i++) {

    %k = %i;

    for (%j = 1; %j <= %n; %j++) {

        echo %k;

        if (%k == 9) {

            %k = 1;

        } else {

            %k++;

        }

    }

    echo '<br!';

} ?!
```

B) Please create code to produce the following output which takes parameter  $n$ .

Example for  $n = 9$ :

1      1  
2      2  
3      3

4 4  
5  
4 4  
3 3  
2 2  
1 1

Answer :

### Section 3 - Database

A) Consider the following two relational database tables:

**Table:** Product

ProductID	Category	Description	Cost
1234	Input	Keyboard	54
9876	Input	Mouse	37
5678	Output	Monitor	570
6543	<null	Printer	345

4567	Other	CPU	1034
------	-------	-----	------

**Table:** Customer

LastName	FirstName	PurchaseDate	Product
Smith	Fred	12/12/2000	1234
Smith	Fred	<null	4567
Jones	Mary	15/12/2000	6543
Bloggs	Jim	15/12/2000	<null

Write out the query would generate the following output:

LASTNAME	SUM(COST)
Jones	345
Smith	1088

Answer :

```
select C.LastName, sum(P.Cost)
from Customer C join Product P on C.Product = P.ProductID
group by C.lastName;
```

B) Consider the following database table:

LastName	FirstName	DOB	JobID	JobTitle
----------	-----------	-----	-------	----------

Blogs	Fred	12/06/1973	123	Programmer
Smith	Jane	15/01/1967	567	Project Manager
Jones	Sarah	22/09/1971	123	Programmer
Smith	Bill	09/05/1974	123	Programmer
Howard	Bob	27/02/1969	987	DBA
Beazley	Jane	12/08/1972	123	Programmer
Packer	John	15/04/1968	444	Analyst

Would you make any changes to this schema? If so, what and why? If not, why not?

Answer :

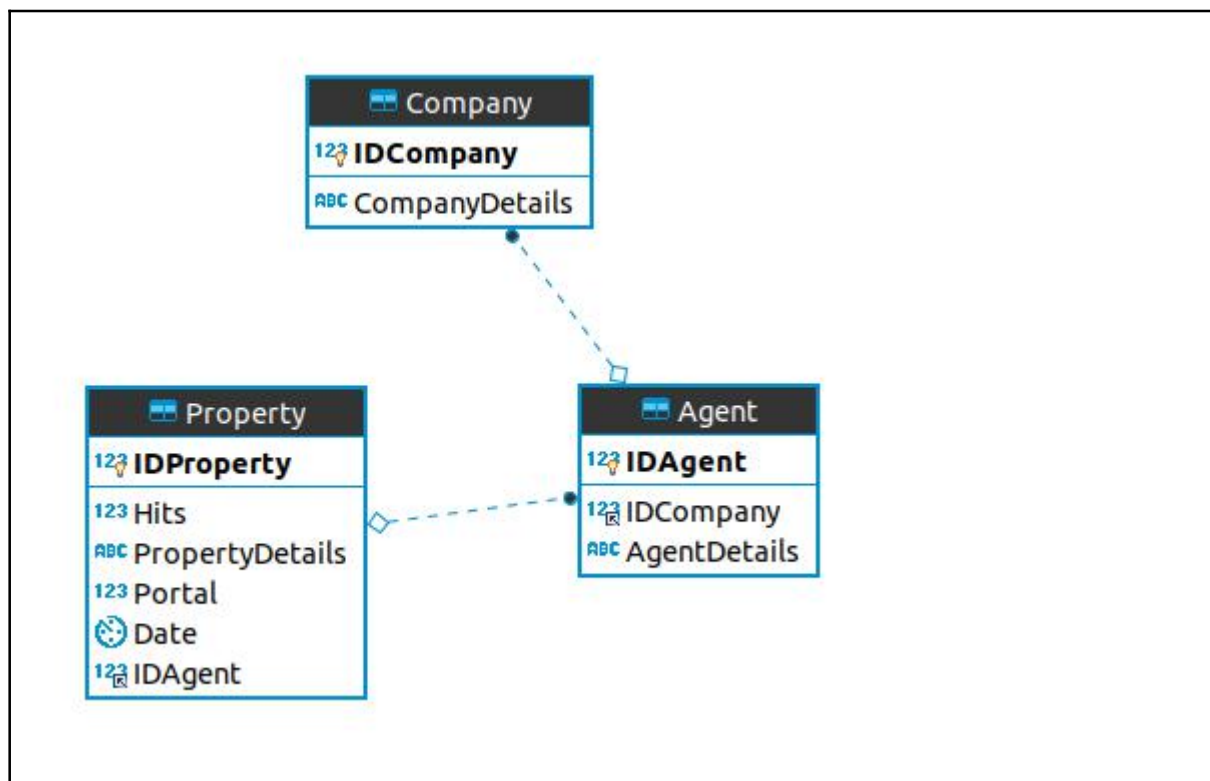
Yes I will make a change for this schema. Because there is a redundant data for a Job. I will separate table for peopleTable and table for jobTable, and using a JobID as a foreign key in table peopleTable with a reference from jobTable JobID.

C) We need to build a website that will show real estate agents the number of times their property listings were viewed (pageviews) on real estate websites (portals). To do this the system must retrieve the daily visit number from the HTML of an admin page in the portal that we don't control, e.g <http://www.realestate.com.au/pdpvisits.ds?id=118114975>. One agent usually send their property data to 3 portals. We have a database of 100 agents and we store the list of their properties in other portals, plus the name of their management company (if they have a management company, as some do not). Assume each agent have 1000 properties and send their all their properties to 3 portals, that means we need to crawl 300,000 admin pages.

1) Please create the database schema required to support this website.

Agent	Company	Property
IDAgent	IDCompany	ID Property
IDCompany	CompanyDetails	Hits(number of visited by cust)
AgentDetails		PropertyDetails
		Portal
		Date
		IDAgent

Answer :



2) Please explain how you will get the data and store it because there are lots of data to collect.

Answer :

- 3) Please create the query to show page view for the last 7 days for agent X and property Y on each portals.

Answer :

```
select A.IDAgent, sum(P.IDProperty)
from Agent A, Property P
where A.IDAgent = x
and P.IDProperty = y
and P.Date between curdate()-7 and curdate()
and A.IDAgent = P.IDAgent
group by P.Portal, A.IDAgent;
```

- 4) Please write the query to retrieve the agent name, management company name if there is one, and the total number of times all properties were viewed for a specified agent in a specified period.

Answer :

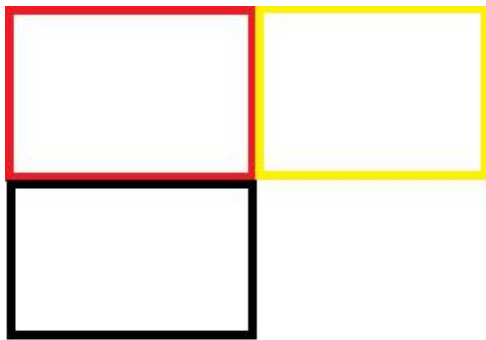
```
select A.AgentDetails, C.CompanyDetails, sum(P.IDProperty)
from Agent A, Property P, company C
where A.IDAgent = x
and A.IDCompany is not null
and P.Date between curdate()-7 and curdate()
and A.IDAgent = P.IDAgent
and A.IDCompany = C.IDCompany
```



group by P.Portal, A.IDAgent, C.IDCompany;

#### Section 4 - Front End

A) Please create code for the layout below using `div`.



Answer :

B) **Using jQuery** and the code you created above, when the page loads please change the border color to green and put the box width in the `div`.

Answer :


Good luck!