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Assignment - 1

B-15

Q1

$\pi_{eid} (\sigma_{aname = \text{"Boeing"}} (\text{Aircraft} \bowtie \text{certified}))$

Q2

$\pi_{ename} (\sigma_{aname = \text{"Boeing"}} (\text{Aircraft} \bowtie \text{certified}) \bowtie \text{Employees})$

Q3

$R_1 \leftarrow \pi_{fro} (\sigma_{\text{from} = \text{"Bonn"} \wedge \text{to} = \text{"Maastricht"}} (\text{flight}))$

$\pi_{aname} (\text{Aircraft} \bowtie R_1)$

Q4

$R_1 \leftarrow \pi_{eid} (\text{certified})$

$R_2 \leftarrow \pi_{eid} (\sigma_{\text{salary} > 100000} (R_1 \bowtie \text{employee}))$

$R_3 \leftarrow \pi_{eid} (\text{certified} \div R_2)$

$\pi_{aname} (\text{Aircraft} \bowtie R_3)$

Q5

$\pi_{name} (\sigma_{\text{salary} > 2000} (\text{Aircraft} \bowtie \text{Marking} \bowtie \text{Employee}))$

$- \pi_{name} (\sigma_{aname = \text{"Boeing"}} (\text{Aircraft} \bowtie \text{Marking} \bowtie \text{Employee}))$

Ans 2

```
<!doctype html>
```

```
<html>
```

```
<head>
```

```
<title> Q2 </title>
```

```
</head>
```

```
<body>
```

```
<form method = "POST" action = "home.php" >
```

```
<input type = "checkbox" name = "food" value = "North Indian">
```

```
<input type = "checkbox" name = "food" value = "South Indian">
```

```
<input type = "checkbox" name = "food" value = "Italian" >
```

```
<input type = "checkbox" name = "food" value = "Chinese" >
```

```
<input type = "submit" >
```

```
<?php
```

```
$c = mysqli_connect ("localhost", "root", "");
```

```
if (mysqli_connect_errno ($c)) {  
    echo "Not open";
```

```
}
```

```
$q = $_POST ["name"];
```

```
$q = array ();
```

```
for ($i = 0; $i < count ($q); $i++) {
```

```
$query = "select * from Table 2 where food = $q [$i]";
```

```
for while ($r = mysqli_fetch_array ($query)) {
```

```
$co [$k++] = $r ["friend-name"];
```

```
}
```

```
}
```

```
for ($i = 0; $i < count ($co); $i++) {
```

```
$query = "select * from Table 1 where friendname = co [$i]";
```

```
while ($r = mysqli_fetch_array ($query)) {
```

```
for echo $r ["conversation"] . "<br>";
```

```
}
```

```
}
```

```
mysqli_close ($c);
```

```
?>
```

```
</body>
```

```
</html>
```

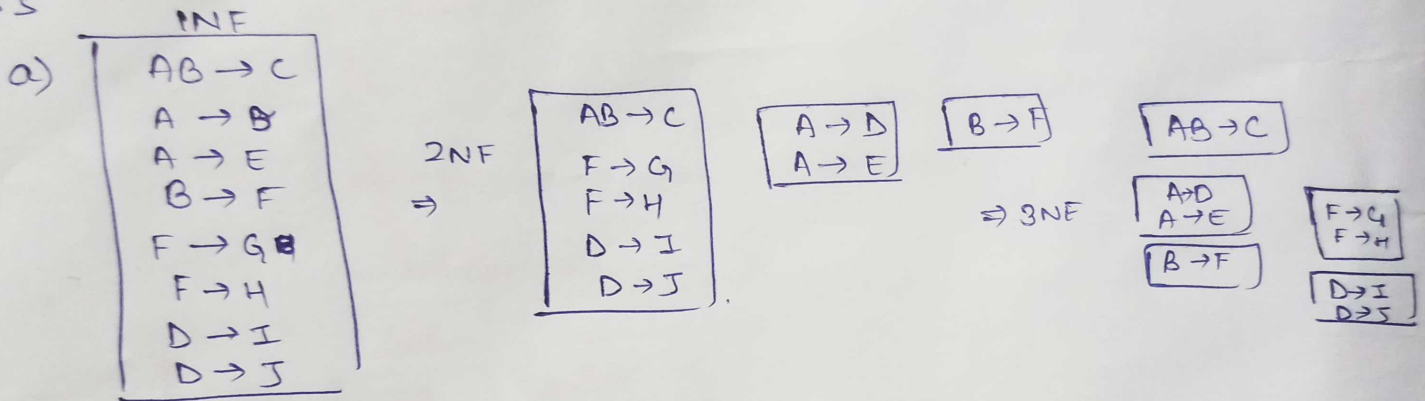

Ans 3

Software	<u>sid</u> <u>oid</u>	Operating System	<u>oid</u>
Installed	<u>cid</u> <u>sid</u>	Dextop	<u>cid</u> <u>did</u>
Computer	<u>cid</u> <u>oid</u>	operation	<u>Did</u> <u>Componentid</u>
Supports	<u>Component-id</u> <u>sid</u>	laptop	<u>cid</u> <u>cid</u> <u>mid</u>
Memory	<u>Component-id</u> <u>mid</u>		
Video Card	<u>Component-id</u> <u>vid</u>		
Sound card	<u>Component-id</u> <u>SoundCardid</u>		
Sold with	<u>Aid</u> <u>cid</u>		
Keyboard	<u>Aid</u> <u>kid</u>		
Monitor	<u>Aid</u> <u>Monid</u>		
Mouse	<u>Aid</u> <u>Moussid</u>		

Ans 4

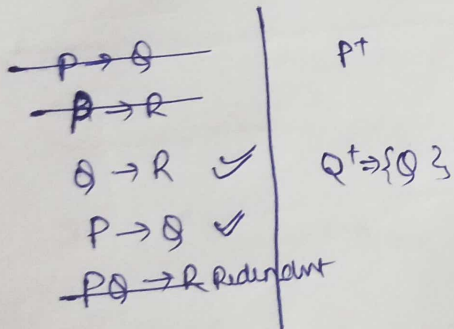
logical data independence is more difficult to achieve than physical data independence, since application programs are heavily dependent on the logical structure of the data that they access.

Ans 5



Key: AB

b)



Minimal cover

