TASK3_README.md - Grip

EVENTS AND REPORT USING MYSQL & PHP

We are going to have a look on creating events (schedules) in database by doing one practical example and generating the report of database record in the pdf form using **fpdf.php**

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1. EVENTS

Lets discuss the events of the database first and find the answers to following questions:

- How Events are created?
- Where can we find events in database?
- How events can be created by sql query?
- What are the types of events?
- How many query can we write in events to perform an action on schedule time?

We will see the funcitonality of events by considering the following scenario:

Let suppose you want the record of the user registration table to be backup into another table(let's say userbackup table) to reduce the load on the server. This can be made possible by creating an event which automatically transfers the user registration table record into the userbackup table. For this you have to create

- **User/Registration Table** - to register users
- **UserBackup Table** - to store backup data
- **An event** - to schedule a time for transfering or backing up the user registration table data into the userbackup table.

By using **phpmyadmin** database we had created the following table

USER TABLE

Create the **user table** by the following sql query:

```
CREATE TABLE `user` (
 `id` int(28) NOT NULL AUTO_INCREMENT,
 `FName` varchar(128) NOT NULL,
 `MName` varchar(128) NOT NULL,
 `LName` varchar(128) DEFAULT NULL,
 `Email` varchar(128) NOT NULL,
 `Mobile` varchar(128) NOT NULL,
 `Password` varchar(128) NOT NULL,
 `DOB` date NOT NULL,
 `Gender` varchar(128) NOT NULL,
 `currenttime` datetime NOT NULL DEFAULT current_timestamp(),
 PRIMARY KEY (`id`)
) ENGINE=InnoDB AUTO_INCREMENT=30 DEFAULT CHARSET=utf8mb4
```

Insert some dummy data into the database or create a UI/Frontend for the registration page for insertng data into the database

and the resultant table along with the user record will look like this :

			b_id	fname	mname	lname	email	mobile	pswd	dob	gender	currenttime
☐	🖉 Edit	📄 Copy ⊝ Delete	23	Ayesha Noor Khan		Khan	ayeshanoorank1920@gmail.com	03452386743	123	2000-11-09	female	2021-02-24 20:22:11.000000
☐	🖉 Edit	📄 Copy ⊝ Delete	24	Hashir Yar Khan		Khan	hashiryarkhan111@gmail.com	03333545443	123	2007-11-01	male	2021-02-24 20:22:11.000000
☐	🖉 Edit	📄 Copy ⊝ Delete	25	Ayesha Yar Sohail		Sohail	ayeshasohail12@gmail.com	03452386724	123	2019-02-24	female	2021-02-24 20:22:11.000000
☐	🖉 Edit	📄 Copy ⊝ Delete	26	Noor Huda Khan		Khan	noorulhuda490@gmail.com	03323293125	123	1972-06-22	male	2021-02-24 20:22:11.000000
☐	🖉 Edit	📄 Copy ⊝ Delete	27	Ayesha Noor Khan		Khan	ayeshanoorank23@gmail.com	03333333333	123	2004-11-09	female	2021-02-24 20:22:11.000000
☐	🖉 Edit	📄 Copy ⊝ Delete	28	Marjaan Javed Malik		Malik	marjaan2013@gmail.com	0345863452	123	1992-04-07	female	2021-02-24 20:50:11.000000
☐	🖉 Edit	📄 Copy ⊝ Delete	29	Sadaf Noor Khan		Khan	sadafkhan203@gmail.com	03452386743	123	2006-11-09	female	2021-02-25 00:16:11.000000

↥ ☐ Check all   With selected: 🖉 Edit   📄 Copy   ⊝ Delete   📤 Export

Note : the currenttime field will contain the time at which the user was registered using NOW() functionin php;

USERBACKUP TABLE

Create the **user table** by the following sql query:

```
CREATE TABLE `userbackup` (
 `b_id` int(128) NOT NULL,
 `fname` varchar(128) NOT NULL,
 `mname` varchar(128) NOT NULL,
 `lname` varchar(128) DEFAULT NULL,
 `email` varchar(128) NOT NULL,
 `mobile` varchar(128) NOT NULL,
 `pswd` varchar(128) NOT NULL,
 `dob` date NOT NULL,
 `gender` varchar(128) NOT NULL,
 `currenttime` datetime(6) NOT NULL DEFAULT current_timestamp(6),
 PRIMARY KEY (`b_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
```

After running the above sql query a table with null data record will be created as shown below:

← 🖥 Server: 127.0.0.1 » 🗄 Database: signboxtask3 » 📊 Table: userbackup

🔲 Browse	🔧 Structure	📄 SQL	🔍 Search	📥 Insert	📤 Export

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0008 seconds.)

SELECT * FROM `userbackup`

| b_id | fname | mname | lname | email | mobile | pswd | dob | gender | currenttime |

Query results operations

📋 Create view

Now our task is to transfer the values from user table into the userbackup table automicatically For this create an event

CREATE EVENT THROUGH SQL QUERY

*On the navbar above in phpmyadmin click on the sql option and write the following query there:

```
CREATE EVENT `userbackup`
ON SCHEDULE EVERY 2 MINUTE
STARTS '2021-02-23 20:30:11'
ON COMPLETION PRESERVE ENABLE
COMMENT 'Archive table'
DO
BEGIN
INSERT INTO userbackup(b_id,fname,lname,email,mobile,pswd,dob,gender,currenttime)
SELECT id,FName,LName,Email,Mobile,Password,DOB,Gender,NOW()
FROM user
WHERE NOT EXISTS (SELECT b_id,fname,lname,email,mobile,pswd,dob,gender,currenttime FROM userbackup WHERE user.id=userbackup.b_id);
END
```

Lets understand the above event query step by step:

- **CREATE EVENT `userbackup`** - This will create an event with name 'userbackup'.

- **ON SCHEDULE EVERY 2 MINUTE** - This means that the event will be active or start after every 2 minutes.

- **STARTS '2021-02-23 20:30:11'** - This sets the start timing of the event or in simply means from when you want to start this event.

- **COMMENT 'Archive table'** - This is optional statement to make you remember that for which purpose you had created the event.

- **DO** - This means that which action you want to perform and write the action afterwards DO keyword

- **BEGIN** - When you want to execute multiple sql queries after DO keyword than you should write BEGIN keyword

- **INSERT INTO userbackup(b_id,fname,..)** - It will insert the user table record into the userbackup table

- **SELECT id,FName,.. FROM user** - It will select the data from the user table which we want to put in userbackup table.

- **WHERE NOT EXISTS (SELECT b_id,fname,.. FROM userbackup WHERE user.id=userbackup.b_id)** - It will check whether the user table data already exist in the userbackup table or not .If it is then it will not copy that data returning false to the **WHERE NOT EXISTS** keyword hence no data will be selected and inserted.

- **END** - It shows end to the BEGIN keyword.

  Note: The query here is a single sql query but it is a good practice to write the queries inside BEGIN and END keyword. Note: The **STARTS '2021-02-23 20:30:11'** statement indicate the start of schedule but this query doesn't have the **ENDS** statemnet that means it will be a recursive event which will be automatically generate again and again. While the events with both STARTS and ENDS are called **ONE TIME** events After running the above query the userbackup table will fill with all the record of the user table as shown:

		b_id	fname	mname	lname	email	mobile	pswd	dob	gender	currenttime
Edit Copy Delete		23	Ayesha Noor Khan		Khan	ayeshanoorank1920@gmail.com	03452386743	123	2000-11-09	female	2021-02-25 20:18:11.000000
Edit Copy Delete		24	Hashir Yar Khan		Khan	hashiryarkhan111@gmail.com	03333545443	123	2007-11-01	male	2021-02-25 20:18:11.000000
Edit Copy Delete		25	Ayesha Yar Sohail		Sohail	ayeshasohail12@gmail.com	03452386724	123	2019-02-24	female	2021-02-25 20:18:11.000000
Edit Copy Delete		26	Noor Huda Khan		Khan	noorulhuda490@gmail.com	03323293125	123	1972-06-22	male	2021-02-25 20:18:11.000000
Edit Copy Delete		27	Ayesha Noor Khan		Khan	ayeshanoorank23@gmail.com	03333333333	123	2004-11-09	female	2021-02-25 20:18:11.000000
Edit Copy Delete		28	Marjaan Javed Malik		Malik	marjaan2013@gmail.com	0345863452	123	1992-04-07	female	2021-02-25 20:18:11.000000
Edit Copy Delete		29	Sadaf Noor Khan		Khan	sadafkhan203@gmail.com	03452386743	123	2006-11-09	female	2021-02-25 20:18:11.000000

CONCLUSION OF EVENTS

Thats how the events are created in the database to perform an action related to database automatically.

2. REPORT

Let suppose you want the record of the user registration table to be available in the pdf or report form so that you can print it out easily. This can be made possible by using **FPDF**, which will generate the database record of users in the pdf form.

WHAT IS FPDF?

FPDF is a PHP class which allows to generate PDF files with pure PHP, that is to say without using the PDFlib library. F from FPDF stands for Free: you may use it for any kind of usage and modify it to suit your needs.
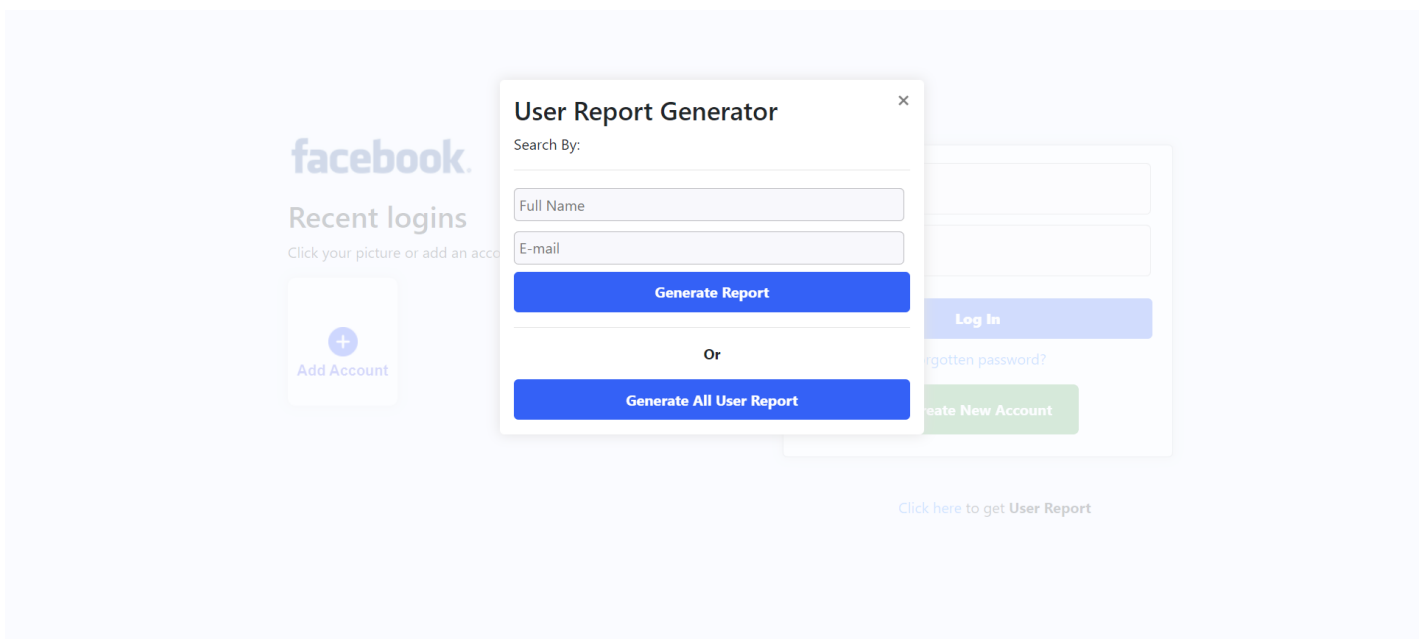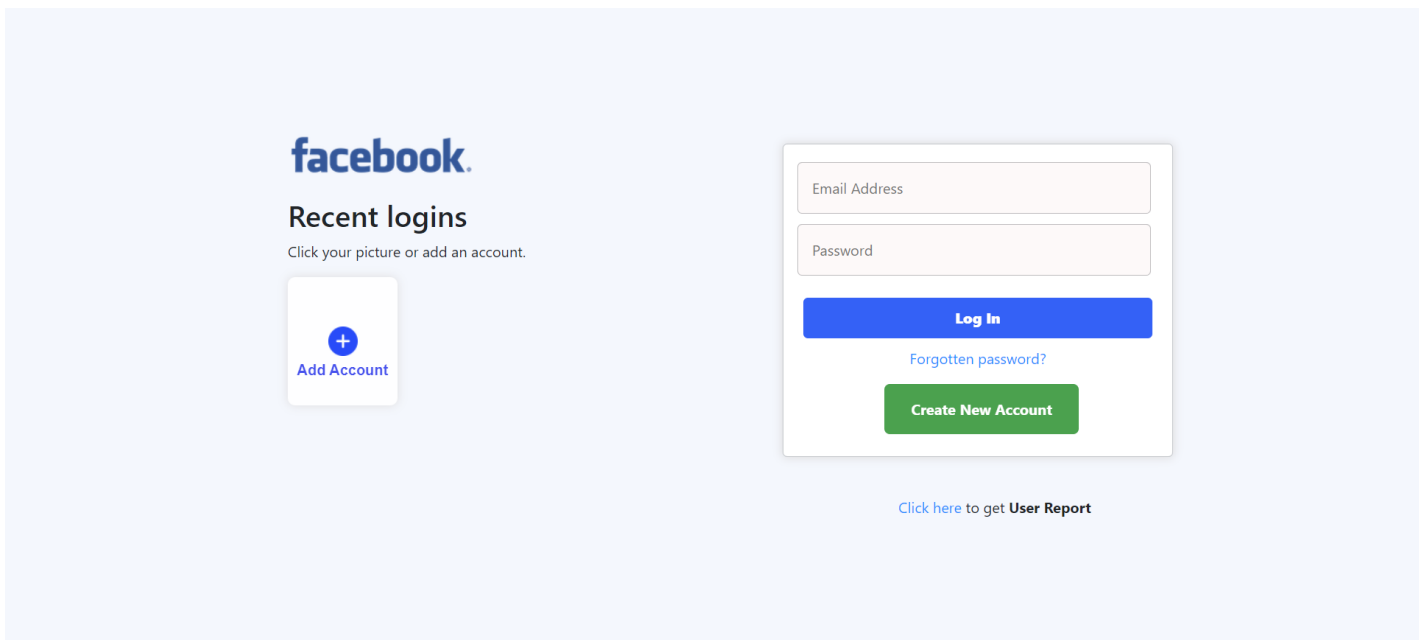
GETTING STARTED:

Consider the user table below:

		b_id	fname	mname	lname	email	mobile	pswd	dob	gender	currenttime
Edit Copy Delete		23	Ayesha Noor Khan		Khan	ayeshanoorank1920@gmail.com	03452386743	123	2000-11-09	female	2021-02-24 20:22:11.000000
Edit Copy Delete		24	Hashir Yar Khan		Khan	hashiryarkhan111@gmail.com	03333545443	123	2007-11-01	male	2021-02-24 20:22:11.000000
Edit Copy Delete		25	Ayesha Yar Sohail		Sohail	ayeshasohail12@gmail.com	03452386724	123	2019-02-24	female	2021-02-24 20:22:11.000000
Edit Copy Delete		26	Noor Huda Khan		Khan	noorulhuda490@gmail.com	03323293125	123	1972-06-22	male	2021-02-24 20:22:11.000000
Edit Copy Delete		27	Ayesha Noor Khan		Khan	ayeshanoorank23@gmail.com	03333333333	123	2004-11-09	female	2021-02-24 20:22:11.000000
Edit Copy Delete		28	Marjaan Javed Malik		Malik	marjaan2013@gmail.com	0345863452	123	1992-04-07	female	2021-02-24 20:50:11.000000
Edit Copy Delete		29	Sadaf Noor Khan		Khan	sadafkhan203@gmail.com	03452386743	123	2006-11-09	female	2021-02-25 00:16:11.000000

We want this above record to be generated as a pdf file. To do this perform the following steps:

1. **Create a Frontend**: In this case, we have a facebook login page.

In the above UI, we have an option for generating the record of all the user or specific user on the basis of Full name or email address or both.

2. **Code**: The following code will demonstrate that how the fpdf will generate the report.

Install fpdf zip file and extract it into the new folder called **lib** and import the class of fpdf.php in the pdf.php file.

```
<?php
require('lib/fpdf.php');
include 'process.php';
```

Make a new connection to the database to get the user data or run sql queries.

```
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "signboxtask3";
$conn =  new mysqli($servername, $username, $password, $dbname);
```

Make a new object of FPDF class with

- First parameter 'P' -Poratrait mode.
- Second parameter 'mm' -page size unit in milimeter.
- First parameter 'A4' -Page style sets to A4.

```
$pdf = new FPDF('P','mm','A4');
```

Call a new page from AddPage() class mathod

```
$pdf->AddPage();
```

Set a logo image by calling Image() class method with parameters (image name, left, top, size).

```
$pdf->Image('fb.png',83,9,40);
```

Set a Line break to 12

```
$pdf->Ln(12);
```

Set the font, weight, and size of the **USER REPORT** cell.

```
$pdf->SetFont('Arial','B',15);
```

Customize cell setting by parameters(left, top, text, border(set to 0 if no border), newline)

```
$pdf->Cell(190,7,'USER REPORT ',0,1,'C');
$pdf->SetFont('Arial','',10);
$pdf->Cell(190,5,'By: Facebook',0,1,'C');
$pdf->Ln(10);
$pdf->SetFont('Arial','B',10);
$pdf->Cell(14,0,'Dated : ',0,1,'C');
```

Show the current date on report using date() function.

```
$pdf->Cell(52,0,date("Y.m.d"),0,1,'C');
$pdf->Cell(325,0,'Developer : Ayesha Noor Khan',0,1,'C');
$pdf->Cell(10,7,'',0,1);
$pdf->SetFont('Arial','B',10);
```

From here we are starting to customize the report table.

```
$pdf->SetFillColor(0,128,255);
$pdf->SetTextColor(255);
$pdf->SetDrawColor(255);
$pdf->SetLineWidth(.3);
$pdf->SetFont('','B');
$pdf->Ln(7);
```

- **SetFillColor** - background color of cell. It takes rgb value(currently set to lightblue).
- **SetTextColor** - text color of cell. It takes rgb value(currently set to black).
- **SetDrawColor** - table lines color . It takes rgb value(currently set to black).
- **SetLineWidth** - table line width.

Give the text to table head with the last parameter of **TRUE** to activate the background color of **SetFillColor**

```
$pdf->Cell(20,6,'USER ID',1,0,'C',TRUE);
$pdf->Cell(45,6,'NAME',1,0,'C',TRUE);
$pdf->Cell(57,6,'EMAIL',1,0,'C',TRUE);
$pdf->Cell(26,6,'CONTACT',1,0,'C',TRUE);
$pdf->Cell(23,6,'BIRTHDATE',1,0,'C',TRUE);
$pdf->Cell(18,6,'GENDER',1,1,'C',TRUE);
$pdf->SetTextColor(0);
$pdf->SetDrawColor(192,192,192);
$pdf->Ln(3);
$pdf->SetFont('Arial','',10);
```

This will simply check for the server POST request and check whether single user report is required or to get all user's report.

> **NOTE** : If all the users are required it will use the query **SELECT * FROM user** and pass the database value into the cell by the statement **$pdf->Cell(45,6,$row['FName'],1,0);**

```
if($_SERVER["REQUEST_METHOD"] == "POST") {
    if(isset($_POST['generateall']))
    {

$detail = mysqli_query($conn, "SELECT * FROM user");
while ($row = mysqli_fetch_array($detail)){
    $pdf->Cell(20,6,$row['id'],1,0);
    $pdf->Cell(45,6,$row['FName'],1,0);
    $pdf->Cell(57,6,$row['Email'],1,0);
    $pdf->Cell(26,6,$row['Mobile'],1,0);
    $pdf->Cell(23,6,$row['DOB'],1,0);
    $pdf->Cell(18,6,$row['Gender'],1,1);
}
}
```

If a specific user report is required it will search it by user name or email or both.

```
else if(isset($_POST['generate']))
{

$ueinfo=$_POST['ueinfo'];
$uminfo=$_POST['uminfo'];
if($_POST['uminfo'] !== null && $_POST['ueinfo'] == null)
{
$detail2 = mysqli_query($conn, "SELECT * FROM user where FName ='$uminfo' ");
}
else if($_POST['uminfo'] == null && $_POST['ueinfo'] !== null)
{
$detail2 = mysqli_query($conn, "SELECT * FROM user where Email ='$ueinfo' ");
}
else if($_POST['uminfo'] !== null && $_POST['ueinfo'] !== null)
{
$detail2 = mysqli_query($conn, "SELECT * FROM user where Email ='$ueinfo' AND FName ='$uminfo' ");
}
while ($row = mysqli_fetch_array($detail2)){
$pdf->Cell(20,6,$row['id'],1,0);
$pdf->Cell(45,6,$row['FName'],1,0);
$pdf->Cell(57,6,$row['Email'],1,0);
$pdf->Cell(26,6,$row['Mobile'],1,0);
$pdf->Cell(23,6,$row['DOB'],1,0);
```

```
$pdf->Cell(18,6,$row['Gender'],1,1);
}
}
}
```

To set the page border, set the **SetDrawColor** to be 0 for black line color and use **Rect(5, 5, 200, 287, 'D');** for page border width and height. The **'D'** is used for **A4 page size**.

```
$pdf->SetDrawColor(0);
$pdf->Rect(5, 5, 200, 287, 'D');
```
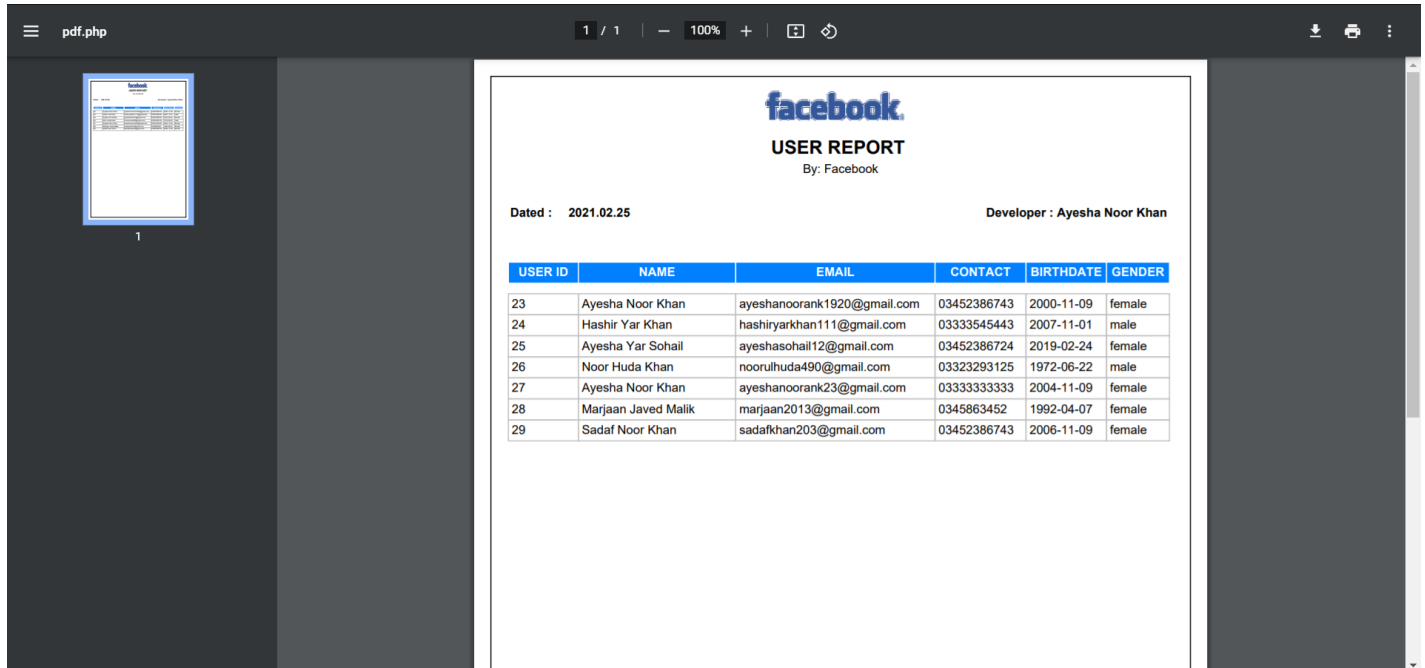
To clean the already exist data in buffer use **ob_end_clean()** method for no garbage value in the report.

```
ob_end_clean();
```

To show the ouput of all the above code use **Output()** method of FPDF class.

```
$pdf->Output();
?>
```

The report will be generated like this:

CONCLUSION OF EVENTS:

The above code will generate a pdf file report of the users that are registered in the user table.

- For full report generator code click here
- For full webpage code click here