4-1

<?php

$serverName = 'localhost';

$userName = "root";

$password = "";

$db = "bigdata";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect\_error) {

die("Connection failed: " . $conn->connect\_error);

}

$sql = "SELECT dp001\_review\_sn FROM your\_table\_name";

$result = $conn->query($sql);

// 初始化影片序號計數陣列

$video\_sn\_counts = array();

// 遍歷結果集，計算每個影片序號的出現次數

while ($row = $result->fetch\_assoc()) {

$video\_sn = $row['dp001\_review\_sn'];

// 如果影片序號已存在於陣列中，增加計數，否則初始化計數為1

if (array\_key\_exists($video\_sn, $video\_sn\_counts)) {

$video\_sn\_counts[$video\_sn]++;

} else {

$video\_sn\_counts[$video\_sn] = 1;

}

}

$conn->close();

// 找到出現次數最多的影片序號及出現次數

$most\_viewed\_video\_sn = array\_search(max($video\_sn\_counts), $video\_sn\_counts);

$max\_view\_count = max($video\_sn\_counts);

// 印出結果

echo "最多影片瀏覽行為的影片序號是： " . $most\_viewed\_video\_sn . "\n";

echo "出現次數： " . $max\_view\_count . "\n";

?>

4-2

<?php

$serverName = 'localhost';

$userName = "root";

$password = "";

$db = "bigdata";

$conn = new mysqli($serverName, $userName, $password, $db);

if ($conn->connect\_error) {

die("連線失敗: " . $conn->connect\_error);

}

// 設定連線編碼

$conn->set\_charset("utf8");

// 讀取資料表

$query = "SELECT \* FROM edu\_bigdata\_imp1";

$result = $conn->query($query);

// 檢查查詢是否成功

if (!$result) {

die("查詢失敗: " . $conn->error);

}

// 初始化筆數計數

$total\_records = 0;

// 過濾資料

while ($row = $result->fetch\_assoc()) {

// 使用 strpos 進行字串比對

if (strpos($row['dp002\_extensions\_alignment'], '十二年國民基本教育類') !== false) {

$total\_records++;

}

}

// 關閉資料庫連線

$conn->close();

// 印出答案

echo $total\_records;

?>

4-3

<?php

$serverName = 'localhost';

$userName = 'root';

$password = '';

$dbName = 'bigdata';

$connection = new mysqli($serverName, $userName, $password, $dbName);

if ($connection->connect\_error) {

die("連線失敗: " . $connection->connect\_error);

}

$query = "SELECT \* FROM edu\_bigdata\_imp1";

$result = $connection->query($query);

// 檢查是否有結果

if ($result->num\_rows > 0) {

// 將結果轉換為關聯數組

$data = [];

while ($row = $result->fetch\_assoc()) {

$data[] = $row;

}

// 將關聯數組轉換為DataFrame

$df = pd.DataFrame($data);

// 過濾掉"dp002\_verb\_display\_zh\_TW"列中的NA或NAN值

$filteredData = $df->dropna(['dp002\_verb\_display\_zh\_TW']);

// 使用value\_counts()方法計算操作行為名稱的出現次數

$verbCounts = $filteredData['dp002\_verb\_display\_zh\_TW']->value\_counts();

// 找到出現次數前三多的值及出現次數

$top3Verbs = $verbCounts->head(3);

// 印出結果

echo "前3個最常發生的操作行為名稱是：<br>";

echo $top3Verbs;

} else {

echo "沒有結果";

}

$connection->close();

?>

4-4

<?php

$serverName = 'localhost';

$userName = "root";

$password = "";

$dbName = "bigdata";

$conn = new mysqli($serverName, $userName, $password, $dbName);

if ($conn->connect\_error) {

die("Connection failed: " . $conn->connect\_error);

}

$sql = "SELECT \* FROM edu\_bigdata\_imp1";

$result = $conn->query($sql);

// Check if query was successful

if ($result === false) {

die("Error in SQL query: " . $conn->error);

}

// Create an array to store filtered data

$filteredData = array();

// Iterate through the result set and filter data

while ($row = $result->fetch\_assoc()) {

$alignmentValue = $row['dp002\_extensions\_alignment'];

// Check if the alignment value contains "校園職業安全"

if (strpos($alignmentValue, '校園職業安全') !== false) {

$filteredData[] = $row;

}

}

// Get the total number of records after filtering

$totalRecords = count($filteredData);

echo $totalRecords;

$conn->close();

?>