110第二學期資料庫管理 – 期末專案

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**Hash :**[**http://www.lorem-ipsum.co.uk/hasher.php?fbclid=IwAR19\_Ytf1P\_Vd49tp95rhrXFum-z7MqFBXuZgwUSKBFmuu12pqfMH8vNj58**](http://www.lorem-ipsum.co.uk/hasher.php?fbclid=IwAR19_Ytf1P_Vd49tp95rhrXFum-z7MqFBXuZgwUSKBFmuu12pqfMH8vNj58)

**Salt :** [**https://www.grc.com/passwords.htm**](https://www.grc.com/passwords.htm)

[Adding salt to Hashing: A Better Way to Store Passwords](https://auth0.com/blog/adding-salt-to-hashing-a-better-way-to-store-passwords/)

**OWASP Cheat Sheet Series:**

* [Cryptographic Storage Cheat Sheet](https://cheatsheetseries.owasp.org/cheatsheets/Cryptographic_Storage_Cheat_Sheet.html)
* [Password Storage Cheat Sheet](https://cheatsheetseries.owasp.org/cheatsheets/Password_Storage_Cheat_Sheet.html)

[W3Schools PHP Online Compiler](https://www.w3schools.com/php/php_compiler.asp)

[PHP password\_hash API](https://www.php.net/manual/en/function.password-hash.php): Creates a password hash

[PHP random\_bytes API](https://www.php.net/manual/en/function.random-bytes.php): Generates cryptographically secure pseudo-random bytes

# 作業繳交注意事項

1. **(請注意檔名請務必完全相符！！)**
2. **ER Diagram (PDF 檔) →** (檔名:db\_學號.pdf，e.g. db\_110423043.pdf)
3. **ER Model 匯出檔 (.mwb 檔) →** (檔名:db\_學號.mwb，e.g. db\_110423043.mwb)
4. **DataBase 的 schema (.sql 檔)** → (檔名:db\_學號.sql，e.g. db\_110423043.sql)

# 情境說明

本專案專注於募資平台中的「回報型群眾募資」又稱為「回饋型群眾募資」，回報型群眾募資指的是發起人需要集資製造物品時，藉由網路平台以預售的方式向他人索取資金，而出資者則可以用較便宜的價格預購物品，或是得到某些限量紀念性商品，台灣常見的平台包含嘖嘖、flyingV、挖貝等。

本專案之題目設計係根據回報型群眾募資平台的運作方式進行設計，包含尚未成為會員、註冊為會員以及成為會員後之相關操作，例如使用者造訪網頁時的搜尋行為、註冊為會員、以會員身份進行提案、針對提案進行贊助、在留言區進行互動等情境，作為設計依據。對回報型群眾募資的運作機制尚不清楚的同學，可以直接上常見平台進行瀏覽，配合期末專案簡報中的背景及條件敘述，以利寫題目時的背景揣摩。

# ER-Model, Tables & Stored Procedures

1. 請將自己試想為 DBA(Database Administrator)，依照以下需求設計資料庫中的 Stored procedures。
2. 以下為資料庫中的 Stored procedures 內容與描述，總共有 12 個 stored procedures(**加分題為[11] , [12]** )。實作時請依照以下 Stored procedures 的命名進行。
3. **Stored procedures 之命名必須完全相符，有任何命名不一的情況，該題將以 0 分計算。**

# Stored Procedres

## [1] sp\_GetFollowedProposalsByMember

1. 透過 sp\_GetFollowedProposalsByUser 取得會員(member\_id) 有追蹤的提案
2. **input :** member\_id (int)
3. **output:** number of rows in the result set (int)

**result: (以 member\_id=3 為例)**

|  |  |  |  |
| --- | --- | --- | --- |
| member\_id | proposal\_title | proposal\_amount | proposal\_goal |
| 3 | 加倍「罩」你！3Zebra雙層氣壓按摩眼罩｜不只是眼罩，前所未有的深度眼周按摩體驗！ | 2,275,192 | 100,000 |
| 3 | 【充電救星｜Smart Badge】一款帶充電線功能的證件套，讓你的辦公生活更有效率！ | 150,040 | 150,000 |

## [2] sp\_RegisterMember

1. 透過 sp\_RegisterMember (email, 加密後的 pwd, salt, 姓名, 地址, 電話) 將 Input 輸入後於 Member 進行會員註冊，並列出新增會員的所有欄位。
2. **input:** email (varchar(64)), hashedPwd(varchar(200)), salt(char(64)), name(varchar(64)), address(varchar(64)), phone(varchar(64))
3. **output:** affected\_row\_num (int) → 被影響的列數，為了確認 Store procedure 有效的執行
4. 註: member\_id is in auto\_increment format

**result: (以新增第一位 member 為例)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **member\_id** | **name** | **email** | **password** | **salt** | **phone** | **address** |
| 1 | 穆姿赭 | crowdfounding@gmail.com | 8289accdb1b78edc0aaeb74e4b0091430fe74f7334f54314bc395f0ad4e95d59 | #sviR91Ve@ | 09126543982 | 桃園市中壢區中大路300號 |

## [3] sp\_UpdatePwd

1. 透過 sp\_UpdatePwd (member\_id, 加密後的 pwd, salt) 更改會員密碼
2. **input:** member\_id(int), hashedPwd(varchar(200)), salt(char(64))
3. **output:** affected\_row\_num (int) → 被影響的列數，為了確認 Store procedure 有效的執行

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **member\_id** | **name** | **email** | **password** | **salt** | **phone** | **address** |
| 1 | 穆姿赭 | crowdfounding@gmail.com | d4273a1c226113fd2bbe3bcf72a7dcb9b9d5f3f31c3e51d0e786b4bdd11d08dc | #sviR91Ve@ | 09126543982 | 桃園市中壢區中大路300號 |

## [4] sp\_Login

1. 透過 sp\_Login (email, 加密後的 pwd) 登入會員
2. **input:** email(varchar(64)), hashedpwd(varchar(200))
3. **output:** status\_code (int) → 登入狀態，為了確認 Store procedure 有效的執行
4. **Definition of status\_code**:

status\_code = 1 --> 登入成功

status\_code = 2 --> 登入失敗 (會員存在但帳號或密碼錯誤)

status\_code = 3 --> 登入失敗 (會員不存在)

|  |
| --- |
| **status\_code** |
| 1 |

## [5] sp\_GetProposalsByKeyword

1. 透過 sp\_GetProposalsByKeyword (關鍵字 keyword) 找出所有 proposal\_title 含有給定關鍵字的提案
2. **input:** keyword(varchar(64))
3. **output:** number of rows in the result set (int)

**result: (以"耳機"為例)**

|  |  |  |
| --- | --- | --- |
| **proposal\_id** | **proposal\_title** | **proposal\_content** |
| 4 | 【 Mu6 Space 2 主動降噪耳機 】挑戰市場最強降噪，還原每個動感細節 | 一款 CP 值爆棚的主動降噪藍牙耳機。真音質 ★ 40mm動圈式單體，低音夠沉 / 藍牙 5.0 Apt-X LL，低延遲。 |
| 2 | 【最後倒數】unfilter 首款聲學力作！年度必敗全方位真無線藍牙耳機 | 我們是致力於音訊產品的團隊 unfilter。看似平凡的簡約，是我們理想的⽣活風格，也完美詮釋品牌首波生活提案：全方位耳機。 |

## [6] sp\_UpdateProposalStatus

1. 透過 sp\_UpdatePorposalStatus(proposal\_id, status) 更改提案狀態
2. 提案狀態只有三種：(1) UNDER-REVIEWING、(2) ONGOING、(3) EXPIRED。更新順序只能遵循 1 → 2 → 3。
3. **input:** proposal\_id(int), status(int)
4. **output:** affected\_row\_num (int) → 被影響的列數，為了確認 Store procedure 有效的執行

**result: (以 proposal\_id=1 為例)**

|  |  |
| --- | --- |
| **proposal\_id** | **status** |
| 1 | 2 |

## [7] sp\_GetHistorySponsorByMember

1. 透過 sp\_GetHistorySponsorByMember (member\_id) 查詢過去贊助過的提案
2. **input:** member\_id(int)
3. **output:** number of rows in the result set (int)

**result: (以 member\_id=3 為例)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **member\_id** | **proposal\_id** | **proposal\_title** | **proposal\_option\_title** | **amount** | **status** |
| 2 | 1 | 𝙋𝙊𝙒𝙀𝙍 𝙂𝙐𝘼\*\*𝙍𝘿 嗶嗶延長線｜偵測電流，守衛你的居家用電安全 | 早鳥優惠-單入組 | 1,000 | 2 |

## [8] sp\_GetUnrepliedComments

1. 透過 sp\_GetUnrepliedComments (member\_id) 搜尋 member\_id 擁有的所有提案中尚未被回覆的留言
2. **input:** member\_id (int)
3. **output:** number of rows in the result set (int)

**result: (以 member\_id=1 為例)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **member\_id** | **proposal\_id** | **proposal\_title** | **comment\_id** | **user\_comment** | **proposer\_response** |
| 1 | 1 | 𝙋𝙊𝙒𝙀𝙍 𝙂𝙐𝘼𝙍𝘿 嗶嗶延長線｜偵測電流，守衛你的居家用電安全 | 2 | 請問超早鳥的預計一月出貨，是預計一月何時出貨? 謝謝 | null |
| 1 | 1 | 𝙋𝙊𝙒𝙀𝙍 𝙂𝙐𝘼𝙍𝘿 嗶嗶延長線｜偵測電流，守衛你的居家用電安全 | 11 | 請問預計三月寄出的訂單，大約何時會寄出？謝謝 | null |
| 1 | 9 | Smio.V 美妍小 V ✦ 4 in 1 溫冷緊緻按摩儀，在家就能享受的頂級 SPA 舒壓保養！ | 7 | 原本就是官網會員的話，這邊購買也能在官網累積嗎？ | null |

## [9] sp\_GetProposalByCompletionRate

1. 透過 sp\_GetProposalByCompletionRate (ratio) 列出達標比例 (該提案已募得金額除以目標金額之比例) 大於等於 ratio 以上的所有提案
2. **input:** ratio (float)
3. **output:** number of rows in the result set (int)

**result: (以 ratio=0.9 為例)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **proposal\_id** | **proposal\_title** | **amount** | **goal** | **ratio** |
| 4 | 【 Mu6 Space 2 主動降噪耳機 】挑戰市場最強降噪，還原每個動感細節 | 2,400,000 | 2,500,000 | 0.96 |
| 3 | Haylou Solar智慧手錶台灣版 | 實現你的所有期待 | 3,800,000 | 1,500,000 | 2.53 |
| 16 | 拾財小樹｜台灣特有玉紋石打造，2022年陪你拾財又招財！ | 300,000 | 320,000 | 0.94 |

## [10] sp\_CreateProposal

1. 透過 sp\_CreateProposal (member\_id, title, content, goal, category) 創建提案
2. **input:** member\_id(int), title(varchar(120)), content(varchar(255)), goal(int), category(varchar(120))
3. **output:** affected\_row\_num (int) → 被影響的列數，為了確認 Store procedure 有效的執行

**result: ( 以 proposal\_id = 5 為例)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **proposal\_id** | **propoal\_title** | **content** | **amount** | **goal** | **status** | **viewed\_num** | **create\_date** | **due\_date** | **category** |
| 5 | 好睏枕【讓你好好睏】脖子的溫柔靠山，釋放你的壓力與電力｜一夜好眠不是夢 | 台灣有超過20萬以上的人有睡眠障礙，你是不是也是其中一員？經常睡不好、睡不飽、醒來卻還是滿身疲累，一夜好眠成了一種奢求。... | 0 | 100,000 | 1 | 0 | 2022-03-15 22:23:00 | 2022-06-14 22:23:00 | 科技 |

## [11] sp\_GetRecommendedProposals

1. 透過 sp\_GetRecommendedProposals (member\_id) 推薦提案給 member\_id 這位會員。推薦內容的篩選標準：
   1. 和 member\_id 贊助相同提案的人也贊助過的提案
   2. 為 member\_id 不曾贊助過的提案
   3. 提案狀態必須是 2。
2. **input:** member\_id(int)
3. **output:** number of rows in the result set (int)

**result: ( 以 member\_id=1 為例)**

|  |  |  |
| --- | --- | --- |
| **proposal\_id** | **propoal\_title** | **status** |
| 4 | 【 Mu6 Space 2 主動降噪耳機 】挑戰市場最強降噪 | 2 |
| 5 | 好睏枕枕芯為100%天然乳膠，出貨時我們會做真空包裝寄送，不用擔心會影響枕頭功能及品質，真正的乳膠特性是打開後完全回彈回原本的樣子。 | 2 |
| 7 | Sealito T2 無線∞輕巧真空保鮮機｜一鍵真空封口，鎖住新鮮美味！ | 2 |

## [12] sp\_DeleteMember

1. 透過 sp\_DeleteMember (member\_id) 將 member 從資料庫移除
2. **input:** member\_id(int)
3. **output:** affected\_row\_num (int) → 被影響的列數，為了確認 Store procedure 有效的執行

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_GetFollowedProposalsMyMember`(

IN inmember\_id int,

OUT numRowResult int

)

BEGIN

SELECT member\_id,title,option\_title,amount,goal from member\_tbl JOIN proposal\_tbl JOIN proposaloption\_tbl

where proposal\_id = any(

SELECT proposal\_id from followingrecord\_tbl

where member\_id=inmember\_id

)

and proposal\_id=option\_proposal\_id

and member\_id=inmember\_id;

select found\_rows() INTO numRowResult;

END

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_GetHistorySponsor`(

IN inmember\_id int,

OUT numRowResult int

)

BEGIN

SELECT member\_id, proposal\_id,title,option\_title,amount,proposal\_status from proposal\_tbl,member\_tbl,proposaloption\_tbl

where proposal\_id =any(

select proposal\_id from sponserrecord

where inmember\_id=member\_id

)

AND member\_id=inmember\_id

AND proposal\_id=option\_proposal\_id;

SELECT found\_rows() into numRowResult;

END

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_GetProposalsByKeyword`(

IN inkeyword varchar(64),

OUT numRowResult int

)

BEGIN

SELECT proposal\_id,title,content FROM proposal\_tbl

WHERE title LIKE concat("%",inkeyword,"%");

select found\_rows() into numRowResult;

END

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_UpdateProposalStatus`(

IN inproposal\_id int,instatus int,

OUT affect\_row int

)

BEGIN

UPDATE proposal\_tbl

SET proposal\_status=instatus

where proposal\_id=inproposal\_id;

SELECT proposal\_id ,proposal\_status from proposal\_tbl

where proposal\_id=inproposal\_id;

SELECT found\_rows() into affect\_row;

END

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_UpdatePwd`(

IN inmember\_id int,inhashedPwd varchar(200),insalt char(64),

OUT numRowResult int

)

BEGIN

update member\_tbl

SET salt=insalt

WHERE inmember\_id=member\_id;

update membercredential\_tbl

SET hashed\_pwd\_string=inhashedPwd

WHERE inmember\_id=hashed\_used\_id;

SELECT member\_id,member\_name,phone,email,user\_address,salt ,hashed\_pwd\_string from member\_tbl,membercredential\_tbl

where member\_id=inmember\_id

AND hashed\_used\_id=inmember\_id;

select found\_rows() into numRowResult;

END

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_GetUnrepliedComments`(

IN inmember\_id int,

OUT numRowResult int

)

BEGIN

SELECT member\_id,proposal\_id,title,comment\_id,user\_comment,proposer\_response from comment\_tbl,proposal\_tbl

WHERE inmember\_id=member\_id

and proposer\_response=" "

AND proposal\_id=comment\_proposal\_id;

SELECT found\_rows() into numRowResult;

END

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_GetPorposalByCompletionRate`(

IN inratio float,

OUT numRowResult int

)

BEGIN

SELECT proposal\_id ,title,amount,goal ,amount/goal as ratio from proposal\_tbl

where amount/goal>= inratio;

SELECT found\_rows() into numRowResult;

END

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_CreateProposal`(

IN inmember\_id int,intitle varchar(200),incontent varchar(255),ingoal int,incategory varchar (120),

OUT affect\_row int

)

BEGIN

DECLARE temp\_category int;

DECLARE new\_proposal\_id int;

DECLARE temp\_duedate date;

ALTER TABLE proposal\_tbl auto\_increment=11;

select category\_id into temp\_category from category\_tbl

where incategory=category\_tbl.category\_name;

select date\_sub(curdate(),interval -90 day) into temp\_duedate;

INSERT INTO proposal\_tbl (title,content,goal,amount,category,proposal\_status,creat\_date,due\_date)

VALUES(intitle,incontent,ingoal,0,temp\_category,1,CURDATE(),temp\_duedate);

select proposal\_id into new\_proposal\_id from proposal\_tbl

where title=intitle;

INSERT INTO proposalmember\_tbl(member\_id,proposal\_id)

VALUES(inmember\_id,new\_proposal\_id);

SELECT proposal\_id,title,content,amount,goal,proposal\_status,creat\_date,due\_date from proposal\_tbl;

SELECT row\_count() +2 INTO affect\_row;

END

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_Login`(

IN inemail varchar(64),inhashedpwd varchar(200),

OUT outstatus\_code int

)

BEGIN

DECLARE temp\_emailmemberid int;

DECLARE temp\_hashedpwdmemberid int;

DECLARE status\_code int;

IF EXISTS ( SELECT email from member\_tbl

WHERE inemail=email

)then

SELECT member\_id INTO temp\_emailmemberid from member\_tbl

where inemail=email;

SELECT hashed\_used\_id INTO temp\_hashedpwdmemberid from membercredential\_tbl

where inhashedpwd=hashed\_pwd\_string;

IF temp\_hashedpwdmemberid = temp\_emailmemberid then

set status\_code = 1;

else

set status\_code=2;

END IF;

ELSE

set status\_code=3;

END IF;

SELECT status\_code into outstatus\_code;

END

CREATE DEFINER=`root`@`localhost` PROCEDURE `sp\_RegisterMember`(

IN inemail varchar(64),inhashedPwd varchar(200),insalt char(64),inname varchar(64),inaddress varchar(64),inphone varchar(200),

OUT affect\_row int

)

BEGIN

declare temp\_memberid int;

INSERT INTO member\_tbl(member\_name,phone,email,user\_address,salt)

VALUES (inname,inphone,inemail,inaddress,insalt);

SELECT member\_id into temp\_memberid from member\_tbl

where salt=insalt;

INSERT INTO membercredential\_tbl(hashed\_used\_id,hashed\_pwd\_string)

VALUES (temp\_memberid,inhashedPwd);

SELECT member\_id ,member\_name,phone,email,user\_address,salt, hashed\_used\_id as member\_password from member\_tbl,membercredential\_tbl

where temp\_memberid=member\_id

and temp\_memberid=hashed\_used\_id;

SELECT row\_count() +2 INTO affect\_row;

END