



### Creating Services for the Web - Exam Paper

**Duration: 60 minutes | Marks: 15**

#### Question:

A game studio needs to make a game “Game\_xxx” with the database design below. Please create services (Restful API). Using knowledge of CSW subject to create service.

No	Endpoint	Method	Description
1	http://localhost:8080/item	Post	Insert Item to item_t table. Return { "Status": "True", "ErrorCode": "200" }
2	http://localhost:8080/player	Post	Insert Item to player_t table Return { "Status": "True", "ErrorCode": "200" }
3	http://localhost:8080/playerbuyitem	Post	Insert Item to player_item_t table Return { "Status": "True", "ErrorCode": "200" }
4	http://localhost:8080/playerinfo	Get	Return list object as below format [ { "PlayerId": "1", "PlayerName": "Nguyen", "PlayerNational": "Viet nam", "ItemName": "Hero 1", "Price": "5.00", "ItemTypeName": "Attach" } ]

#### Database information:

**Database Name:** game\_xxx

```
CREATE TABLE item_type_t (
  item_type_id INT AUTO_INCREMENT NOT NULL,
  item_type_name VARCHAR(50),
  PRIMARY KEY (item_type_id)
);
```

```
CREATE TABLE item_t (  
    item_id VARCHAR(10) NOT NULL,  
    item_name VARCHAR(120),  
    item_type_id INT,  
    price DECIMAL(21, 6),  
    PRIMARY KEY (item_id),  
    CONSTRAINT FK_ItemTable_ItemTypeTable FOREIGN KEY (item_type_id)  
REFERENCES item_type_t (item_type_id)  
);  
CREATE TABLE player_t (  
    player_id INT AUTO_INCREMENT NOT NULL,  
    player_name VARCHAR(120),  
    player_national VARCHAR(50),  
    PRIMARY KEY (player_id)  
);  
CREATE TABLE player_item_t (  
    item_id VARCHAR(10) NOT NULL,  
    player_id INT NOT NULL,  
    PRIMARY KEY (item_id, player_id),  
    CONSTRAINT FK_PlayerItem_ItemTable FOREIGN KEY (item_id) REFERENCES  
item_t (item_id),  
    CONSTRAINT FK_PlayerItem_PlayerTable FOREIGN KEY (player_id)  
REFERENCES player_t (player_id)  
);  
INSERT INTO item_type_t (item_type_name) VALUES ('Attach'), ('Defense');
```

## Marking Schema:

Question	Mark
Create entities: ItemType, Item, Player ...	4
Create API No 1	3
Create API No 2	3
Create API No 3	3
Create API No 4	2
<b>Total</b>	<b>15</b>