**Московский Авиационный Институт**

**(национальный исследовательский университет)**Факультет прикладной математики и физики  
Кафедра вычислительной математики и программирования

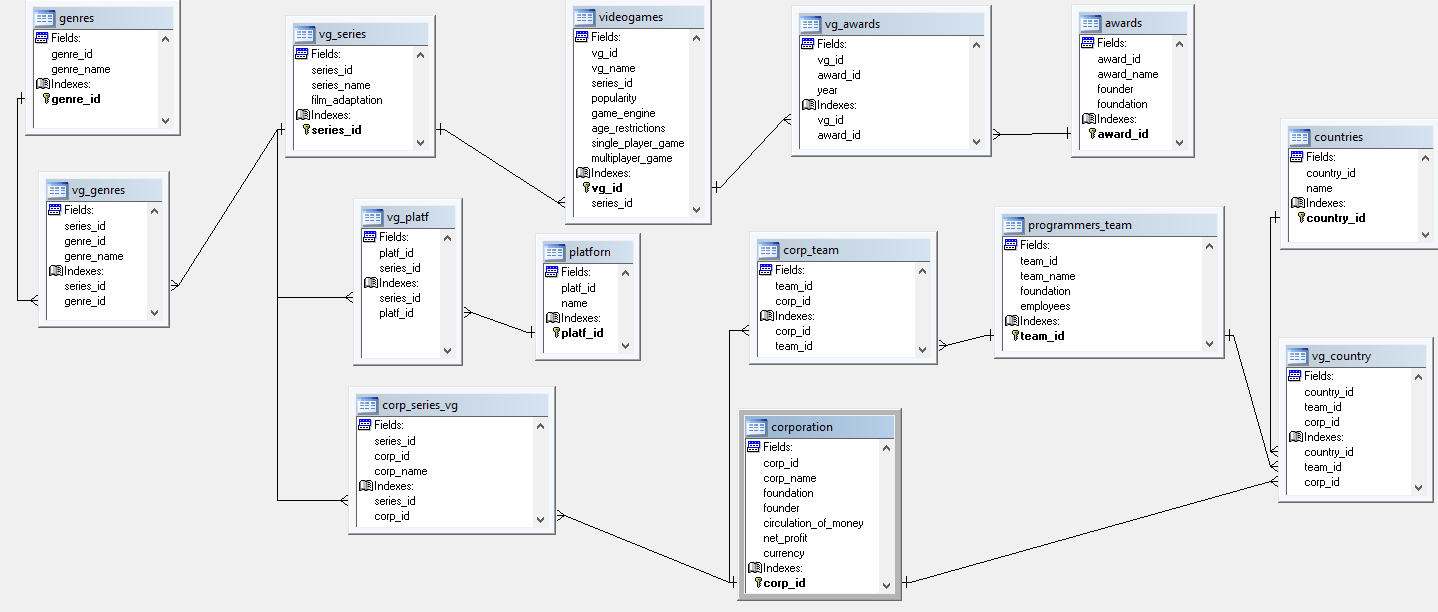
**Базы данных**

**Отчет по лабораторным работам**

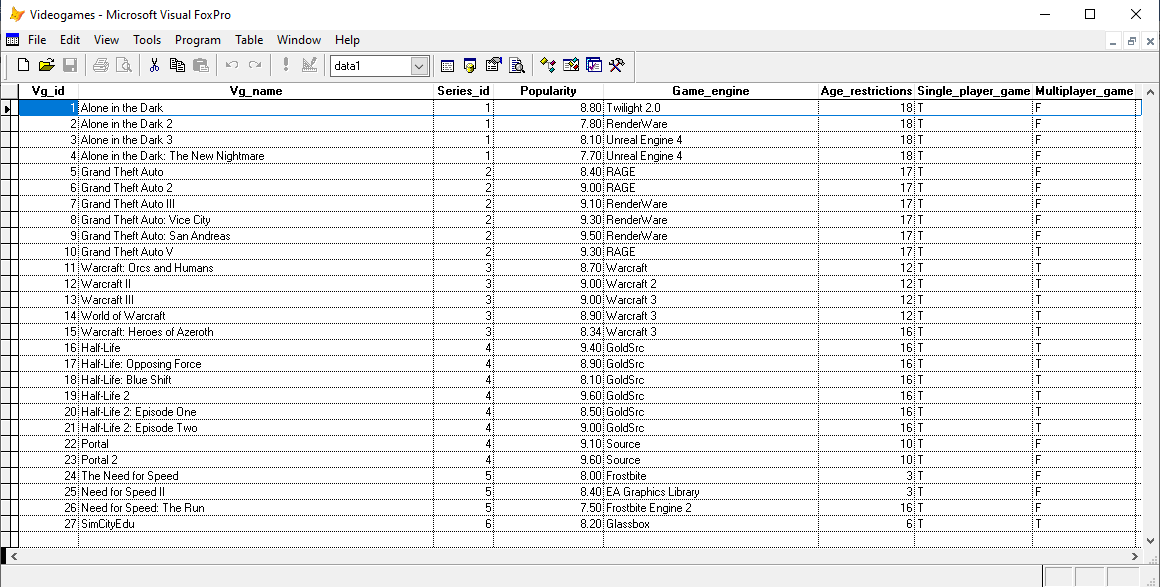
**База данных: «Компьютерные игры»**

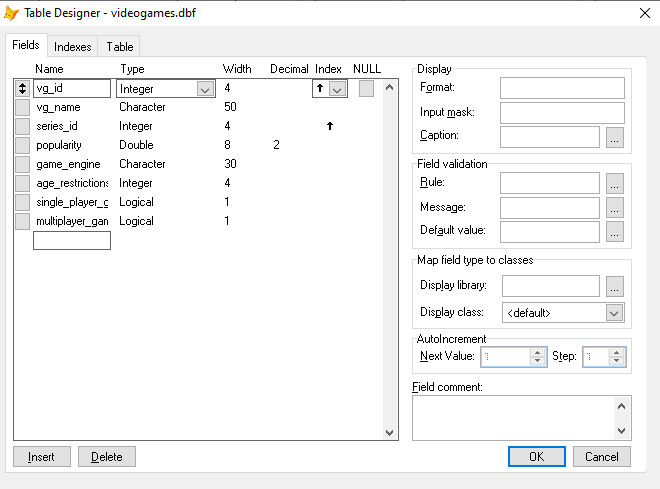
|  |  |
| --- | --- |
| Студент: | Вельтман Л.Я. |
| Группа: | 8о-307Б |
| Преподаватель: | Кузнецова Е.В. |

**Реализация БД в FoxPro**

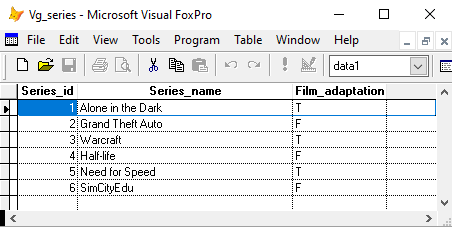


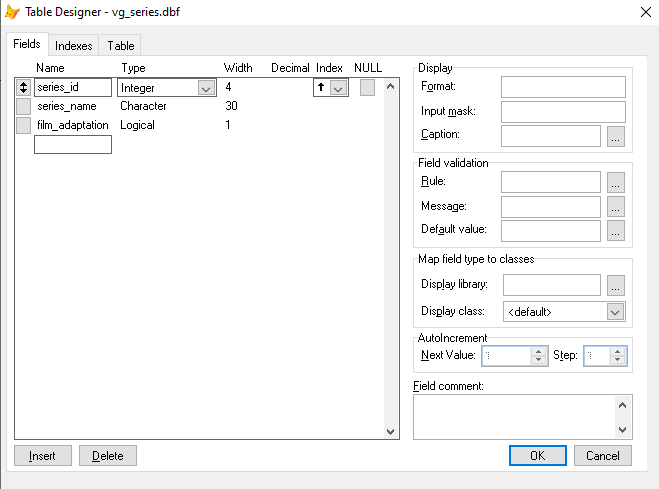
**Таблица videogames**

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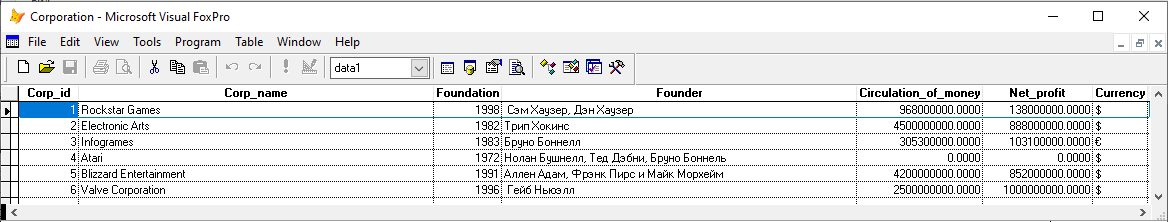
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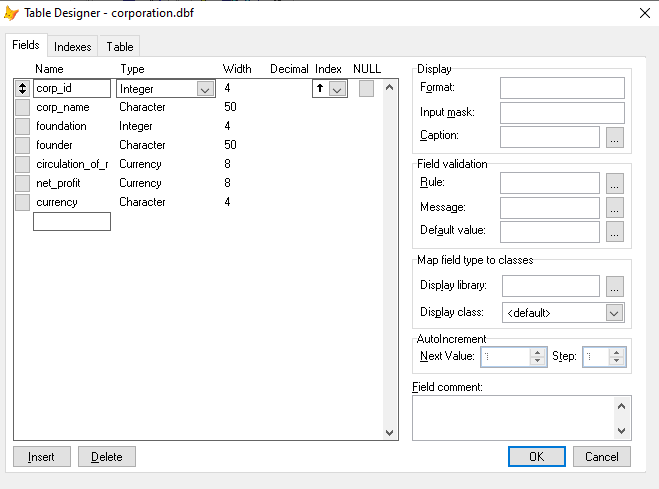
**Таблица vg\_series**

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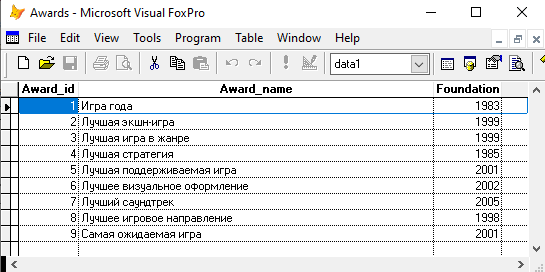
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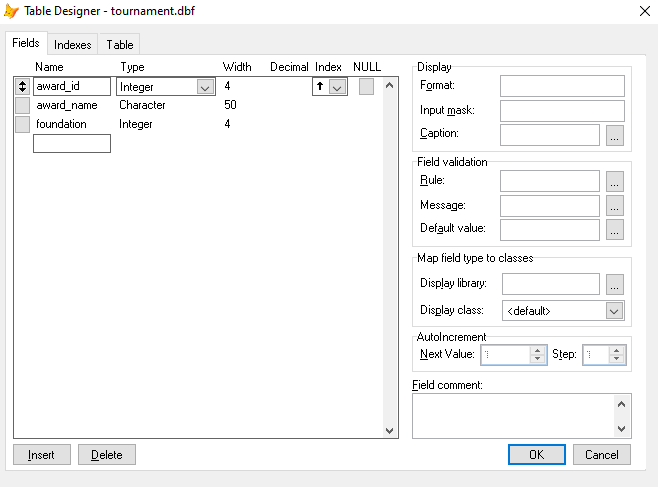
**Таблица corporation**

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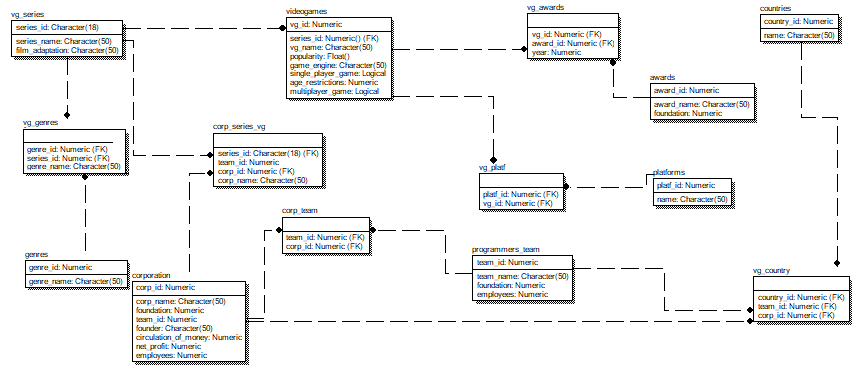
**Таблица awards**

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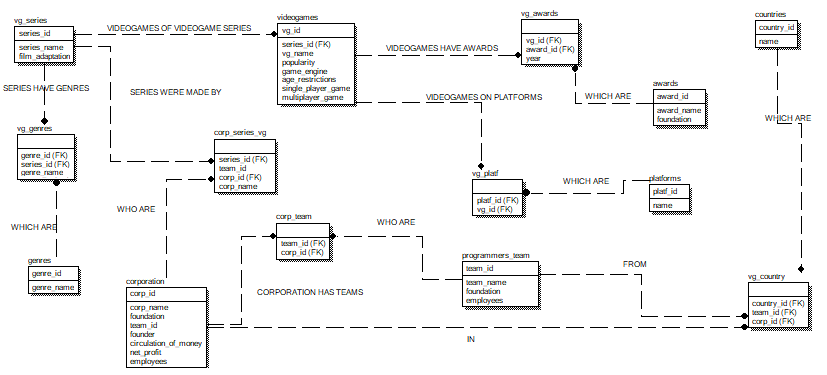
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**Реализация БД в ERWIN**

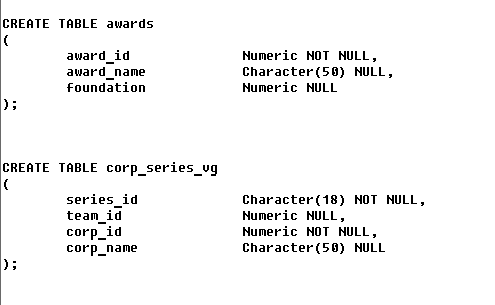
* **Физический тип**

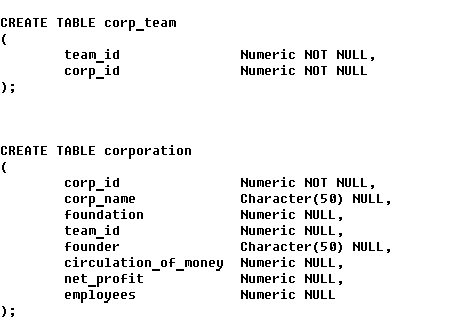


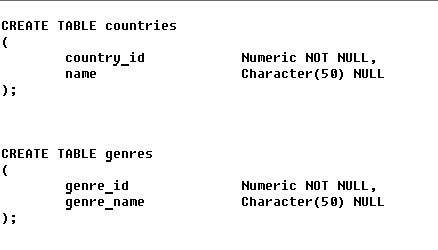
* **Логический тип**

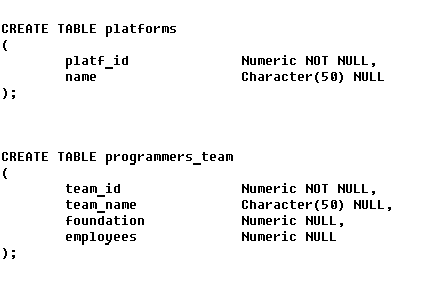
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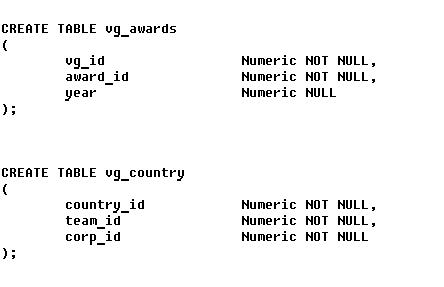
* **Код**

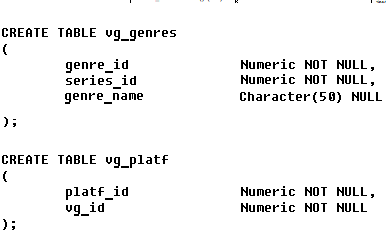
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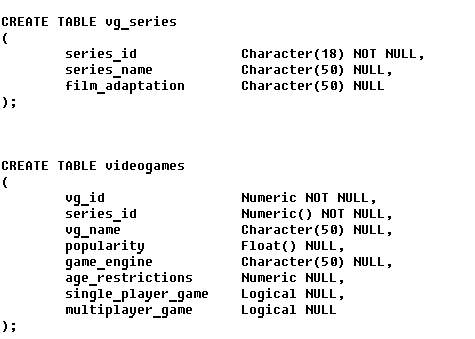
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**Сложные запросы к базе данных**

1. **Пары корпораций, владеющих одинаковыми командами разработчиков:**

SELECT DISTINCT CORP1.corp\_id AS corp1, CORP2.corp\_id AS corp2, TEAM.team\_id AS team\_id, TEAM.team\_name AS team\_name ;

FROM corporation AS CORP1, corporation AS CORP2, corp\_team AS CP1, corp\_team AS CP2, programmers\_team AS TEAM ;

WHERE(((CP1.team\_id = CP2.team\_id ;

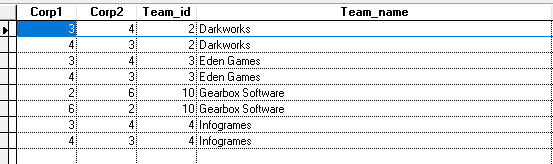
AND CP1.team\_id = TEAM.team\_id) ;

AND CP1.corp\_id = CORP1.corp\_id) ;

AND CP2.corp\_id = CORP2.corp\_id) ;

AND CORP1.corp\_name <> CORP2.corp\_name ;

ORDER BY team\_name



**2) В каких многоплатформенных ( > 3 ) играх нет мультиплеера, допустимый возраст игрока выше 12 лет(вкл):**

SELECT DISTINCT videogames.vg\_id, videogames.vg\_name, videogames.multiplayer\_game, videogames.age\_restrictions, COUNT(vg\_platf.series\_id) AS numOfMult ;

FROM vg\_platf ;

JOIN vg\_series ON vg\_series.series\_id = vg\_platf.series\_id ;

JOIN videogames ON vg\_platf.series\_id = videogames.series\_id ;

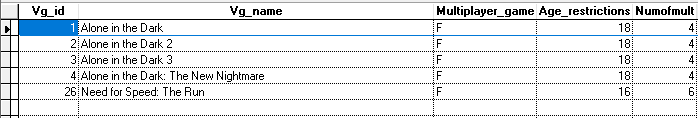
WHERE ( videogames.age\_restrictions >= 12 ;

AND videogames.multiplayer\_game = .F.) ;

GROUP BY videogames.vg\_id, videogames.vg\_name, vg\_platf.series\_id, videogames.multiplayer\_game, videogames.age\_restrictions ;

ORDER BY videogames.vg\_id ;

HAVING COUNT(vg\_platf.series\_id) > 3



**3) Корпорация с наибольшим разнообразием жанров видеоигр:**

SELECT vg\_genres.series\_id, vg\_series.series\_name, corp\_series\_vg.corp\_id, corp\_series\_vg.corp\_name, COUNT(vg\_genres.series\_id) AS cnt\_series\_id ;

FROM vg\_genres ;

JOIN vg\_series ON vg\_genres.series\_id = vg\_series.series\_id ;

JOIN corp\_series\_vg ON vg\_genres.series\_id = corp\_series\_vg.series\_id ;

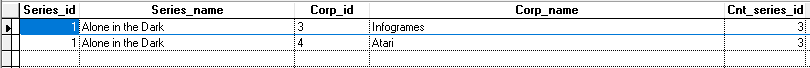
WHERE vg\_genres.series\_id = ;

(SELECT MAX(vg\_genres.series\_id) ;

FROM vg\_genres genr WHERE vg\_genres.series\_id = genr.series\_id) ;

GROUP BY vg\_genres.series\_id, vg\_series.series\_name, corp\_series\_vg.corp\_id, corp\_series\_vg.corp\_name ;

ORDER BY cnt\_series\_id



**4) Определить игры и их жанры, имеющие минимальную популярность:**

SELECT DISTINCT videogames.vg\_id, videogames.vg\_name, vg\_genres.genre\_name, videogames.popularity ;

FROM videogames ;

JOIN vg\_series ON videogames.series\_id = vg\_series.series\_id ;

JOIN vg\_genres ON vg\_series.series\_id = vg\_genres.series\_id ;

WHERE videogames.popularity = (SELECT MIN(videogames.popularity) FROM videogames vd WHERE videogames.series\_id = vd.series\_id) ;

ORDER BY videogames.vg\_id



**5) Определить клуб, который хуже всех играет в домашних матчах:**

SELECT DISTINCT programmers\_team.team\_id, programmers\_team.team\_name, programmers\_team.foundation, programmers\_team.employees, vg\_country.country\_id, countries.name ;

FROM programmers\_team ;

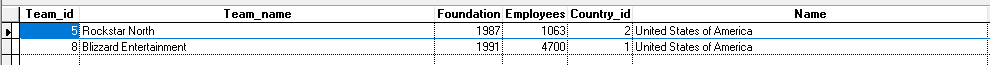
JOIN countries ON vg\_country.country\_id = countries.country\_id ;

JOIN vg\_country ON programmers\_team.team\_id = vg\_country.team\_id ;

WHERE (programmers\_team.foundation > 1985 ;

AND programmers\_team.foundation < 1995) ;

AND programmers\_team.employees > (SELECT AVG(programmers\_team.employees) FROM programmers\_team) ;

ORDER BY programmers\_team.team\_id

**6) Определить игру, не получившую награды за определенный промежуток времени, но с популярностью выше среднего**

SELECT DISTINCT videogames.vg\_id, videogames.vg\_name, videogames.popularity ;

FROM videogames, vg\_awards ;

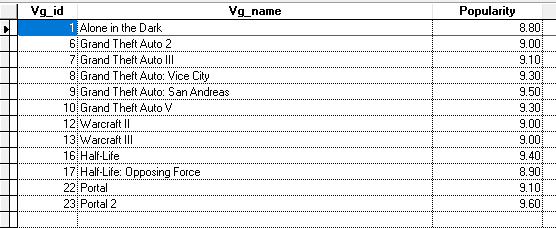
WHERE videogames.vg\_id NOT IN (SELECT DISTINCT vg\_awards.vg\_id FROM vg\_awards ;

WHERE vg\_awards.year > 2000 ;

AND vg\_awards.year < 2010) ;

AND videogames.popularity > (SELECT AVG(videogames.popularity) FROM videogames) ;

ORDER BY videogames.vg\_id



**7) Корпорация с максимальным заработком из заданной страны**

SELECT DISTINCT corporation.corp\_id, corporation.corp\_name, corporation.net\_profit, vg\_country.country\_id ;

FROM corporation ;

JOIN (SELECT DISTINCT corp\_id FROM vg\_country WHERE vg\_country.country\_id = 3 GROUP BY corp\_id) as t ;

ON (t.corp\_id = corporation.corp\_id) WHERE corporation.net\_profit = (SELECT MAX(corporation.net\_profit) FROM corporation) ;

ORDER BY corporation.corp\_id

