

RankSmithers

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Created At: 12/03/23
Last Updated At: 12/10/23 23:10:12



Users

1. Administrators of Robert H. Smith School of Business
2. Prospective students

Sources

- Robert H. Smith School of Business Directory:
<https://www.rhsmith.umd.edu/directory>
- Robert H. Smith School of Business Programs:
<https://www.rhsmith.umd.edu/programs/business-masters>
- U.S. News & World Report:
<https://www.usnews.com/best-graduate-schools>
- QS World University Rankings:
<https://www.topuniversities.com/qs-world-university-rankings>
- The Princeton Review:
<https://www.princetonreview.com/business-school>



More Sources

- Times Higher Education (THE) World University Rankings:
<https://www.timeshighereducation.com/world-university-rankings>
- QS Business Masters Rankings:
<https://www.topuniversities.com/university-rankings/business-masters-rankings>
- Financial Times:
<https://rankings.ft.com/>
- Best Masters:
<https://www.best-masters.com/>



Mission Statement:

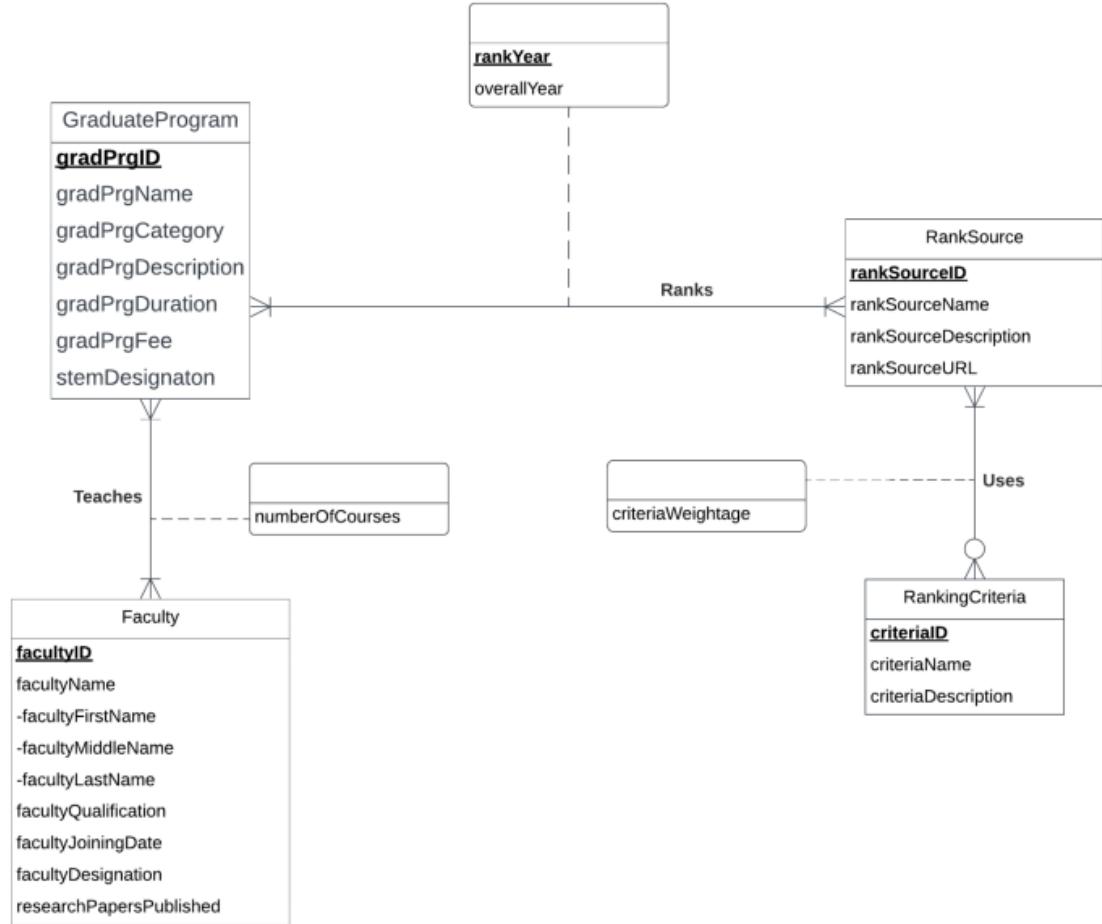
To deliver valuable data-driven insights to the Robert H. Smith School of Business by curating and analyzing graduate program rankings data obtained from various sources, thereby empowering the school with the required knowledge for the improvement and optimization of its programs.



Mission Objectives:

1. To enable efficient and optimized resource allocation by identifying and analyzing top-performing graduate programs at the Robert H. Smith School of Business.
2. To provide insights on potential areas of improvement of graduate programs by offering historical perspectives of their performances and monitoring the evolution of their rankings.
3. To enable informed decision-making regarding the enhancement of program strengths by evaluating the influence of factors such as academic reputation and graduation rates on program rankings.
4. To effectively organize and make use of faculty data in the database to improve the caliber of academic programs, research output, and the Robert H. Smith School's standing overall.

Conceptual Database Design: ER diagram



Relational Schema

- GraduateProgram (gradPrgID, gradPrgName, gradPrgCategory, gradPrgDescription, gradPrgDuration, gradPrgFee, gradPrgCredits, stemDesignation)
- RankSource (rankSourceID, rankSourceName, rankSourceDescription, rankSourceURL)
- Faculty (facultyID, facultyFirstName, facultyMiddleName, facultyLastName, facultyQualification, facultyJoiningDate, facultyDesignation, researchPapersPublished)
- RankingCriteria (criterialID, criteriaName, criteriaDescription)
- Ranks (gradPrgID, rankSourceID, rankYear, overallRank)
- Teaches (gradPrgID, facultyID, numberOfCourses)
- Uses (rankSourceID, criterialID, criteriaWeightage)



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Physical Database Design:



```
CREATE TABLE [Project.GraduateProgram] (
    gradPrgID CHAR (20) NOT NULL,
    gradPrgName VARCHAR(30),
    gradPrgCategory VARCHAR(5),
    gradPrgDescription VARCHAR(200),
    gradPrgDuration INT,
    gradPrgFee CHAR(10),
    gradPrgCredits INT,
    stemDesignation VARCHAR(10),
    CONSTRAINT pk_GraduateProgram_gradPrgID PRIMARY KEY
        (gradPrgID),
);
```

```
CREATE TABLE [Project.Ranks] (
    gradPrgID CHAR (20) NOT NULL,
    rankSourceID CHAR(20),
    rankYear INT,
    overallRank INT,
    CONSTRAINT pk_Ranks_gradPrgID_rankSourceID_rankYear PRIMARY
        KEY(gradPrgID,rankSourceID,rankYear),
    CONSTRAINT fk_Ranks_rankSourceID FOREIGN KEY (rankSourceID)
        REFERENCES [Project.RankSource] (rankSourceID)
        ON DELETE CASCADE ON UPDATE CASCADE,
    CONSTRAINT fk_Ranks_gradPrgID FOREIGN KEY (gradPrgID)
        REFERENCES [Project.GraduateProgram] (gradPrgID)
        ON DELETE CASCADE ON UPDATE CASCADE
);
```





What is the latest rank of all the programs offered at Robert H Smith School of Business

```
GO
DROP VIEW IF EXISTS Latest_Rank_View
GO
CREATE VIEW Latest_Rank_View AS
SELECT gp.gradPrgName AS 'Graduate Program',
rs.rankSourceName AS 'Rank Source',
r.rankYear AS 'Year',r.overallRank AS 'Rank'
FROM [Project.GraduateProgram] gp
JOIN [Project.Ranks] r ON gp.gradPrgID = r.gradPrgID
JOIN [Project.RankSource] rs ON r.rankSourceID = rs.rankSourceID
INNER JOIN (SELECT gradPrgID, rankSourceID, MAX(rankYear) as maxYear
            FROM [Project.Ranks]
            GROUP BY gradPrgID, rankSourceID)
as latestRanks ON r.gradPrgID = latestRanks.gradPrgID
AND r.rankSourceID = latestRanks.rankSourceID
AND r.rankYear = latestRanks.maxYear
GO
SELECT * FROM Latest_Rank_View
ORDER BY 'Graduate Program', 'Rank Source'
```

	Graduate Program	Rank Source	Year	Rank
1	Accounting	Best Masters	2023	34
2	Business Administration	Financial Times	2023	57
3	Business Analytics	QS World University Rankings	2023	10
4	Finance	Financial Times	2023	55
5	Information Systems	U.S. News & World Report	2023	22
6	Marketing Analytics	Princeton Review	2021	15
7	Marketing Analytics	QS Business Masters Rankings	2023	39
8	Quantitative Finance	Financial Times	2023	NULL
9	Supply chain management	QS World University Rankings	2023	28





Who are the faculty members teaching in the programs ranked below 25 in the year 2022 and how many courses do they teach?

```
GO
DROP VIEW IF EXISTS Top_Rank_Faculty_View
GO
CREATE VIEW Top_Rank_Faculty_View AS
SELECT gp.gradPrgName AS 'Graduate Program',
MinRank.ProgramRank AS 'Rank',
CONCAT(f.facultyFirstName, ' ', f.facultyMiddleName, ' ', f.facultyLastName) AS 'Faculty Name', t.numberOfCourses AS 'Number of Courses'
FROM [Project.Faculty] f
JOIN [Project.Teaches] t ON f.facultyID = t.facultyID
JOIN [Project.GraduateProgram] gp ON t.gradPrgID = gp.gradPrgID
JOIN (SELECT gradPrgID, MIN(overallRank) as ProgramRank
      FROM [Project.Ranks]
      WHERE rankYear = 2022
      GROUP BY gradPrgID) MinRank ON gp.gradPrgID = MinRank.gradPrgID
WHERE MinRank.ProgramRank <= 25
GO
SELECT * FROM Top_Rank_Faculty_View
ORDER BY 'Graduate Program','Faculty Name'
```

	Graduate Program	Rank	Faculty Name	Number of Courses
1	Information Systems	8	John Bono	1
2	Information Systems	8	Paul Shapiro	2
3	Information Systems	8	Tejwansh Singh Anand	3
4	Information Systems	8	Woei-Jyh Lee	1



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Thank you