

## Teaching Case

# American Guild of Musical Artists: A Case for System Development, Data Modeling, and Analytics

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### Abstract

This article presents a case scenario that may be used in system analysis and design, database management, and business analytics classes. The case document includes realistic, detailed information on the operations at the American Guild of Musical Artists (AGMA). Examples of assignments for each class and suggested reading are presented. In each assignment, students should learn relevant concepts and skills before applying them to create the deliverables. The core application in the case is a membership accounting system (a variation of an accounts receivable system) with several custom features that require innovative reflection by the student analysts. Instructor's materials are available.

**Keywords:** Database design, Systems analysis and design, Entity-relationship diagram, Data flow diagram, Analytics, Business process, Teaching case.

### 1. ORGANIZATIONAL BACKGROUND

Founded in 1936, the American Guild of Musical Artists (AGMA) is an AFL-CIO affiliated labor union that represents about 8,000 active and retired opera and concert singers, production personnel and dancers at principal opera, concert, and dance companies throughout the United States (<http://www.musicalartists.org/>). It was established in an effort to prevent the exploitation of opera singers who were, at the time, being forced into oppressive contracts with few benefits or protections.

### 2. OPERATIONS AND DATA REQUIREMENTS

AGMA is organized into 11 regional jurisdictions across the country with field offices in several major cities. AGMA members enjoy the benefits, privileges and protections under various national collective bargaining agreements including guaranteed salaries, rehearsal and overtime pay, regulated work hours, vacation, and sick pay. Over the years, AGMA expanded its jurisdiction to include dancers (plus ice skaters) and production/backstage personnel. The union members are classified according to their primary pattern of employment with the categories being

Soloist, Chorister, Dancer, Choreographer, Actor, Stage Manager and Stage Director. Leadership of the union is provided by the Board of Governors and Local Area Committees consisting of members elected by other members. These groups create policies which are then implemented by professional staffs employed at AGMA offices. AGMA maintains its headquarters and principal office in New York City and has satellite offices in Philadelphia, Washington DC, Miami, Chicago, Los Angeles, San Francisco, and Seattle.

AGMA operations regarding signatory agreement, membership, and accounting are described below:

### **2.1 Overview of Operations**

Opera, dance and concert companies that have signed a collective bargaining agreement with AGMA are referred to as signatory companies. When an artist is hired by a signatory company to work in one of the covered categories, that individual must be a member of the AGMA. Artists wishing to join the Guild must pay an initiation fee and continue to pay both a basic dues fee on an annual basis plus a percentage of their salary earned while working in designated roles. Elections are held to elect the Board of Governors from the membership with the number of governors dependent upon the location and categories of the AGMA member population. AGMA also maintains a directory of auditions that have been scheduled by the signatory companies.

### **2.2 Signatory Companies and Agreements**

There are approximately 100 companies that have signed a collective bargaining agreement with AGMA. They include most large opera and dance companies in most of the major cities in the United States, e.g. the New York City Ballet, the San Francisco Opera, the Joffrey Ballet, and the New York Grand Opera. Any opera, choral, or dance company wishing to establish such an agreement with the AGMA must complete an application form supplied by the AGMA Signatory Department. The information required in the application includes: company legal name, address, phone, email and a contact individual. If the company wishes to link its web site to AGMA's web site, then that web site address must be provided. There are separate types of contracts covering opera, dance, and concert and each contract is for a specific duration. These contracts detail the guaranteed salaries (e.g. rehearsal and overtime pay) for all categories of work (e.g. Leading, Feature, Supporting, Bit Solo, and Bit Mute for opera); regulated work hours; vacation and sick pay, working conditions, and dispute

resolution procedures. When a contract expires, a revised contract must be negotiated and signed by each company. AMGA wishes to maintain a record of all current and previous contracts that each company signed.

When the initial signed contract has been received and approved, AGMA assigns the company an identification number (SignatoryID). Additional information collected includes the company's legal name, address, phone, fax, email address, a primary contact person and his/her phone number. In addition, an agreement code (AgreementTypeID) indicating the specific agreement signed plus the sign date and the agreement effective date range (agreement start and termination dates) are recorded. A company may be signatory to multiple contracts at the same time.

### **2.3 Membership**

Any artist who takes employment at a signatory company in a covered position must join the AGMA and must continue to be a member in good standing for the term of the engagement. The Membership Department receives the completed application form from the artist and validates the information provided. Please see Appendix A for the Application for Membership form, also available at [http://www.musicalartists.org/membership\\_general.html](http://www.musicalartists.org/membership_general.html)

Upon receipt of the applicant's initial year's basic dues payment of \$78 and an arrangement for payment of the \$500 initiation fee, the artist's application information is entered into the system. The legal name, professional name, social security number, gender, primary employment category (Soloist, Chorister, Dancer, Choreographer, Actor, Stage Manager and Stage Director), date of birth, country of citizenship, and date joined are recorded. A unique membership number (MemberID) is automatically assigned to each artist by the system. The StatusID is set to "A" (Active) in the data base and a membership card is created and sent to the new member.

AGMA membership status may be Active, Inactive, Honorary, Life, and Deceased. A member's status may change over time and AGMA needs to track the history of each member's status. Persons who have rendered distinguished service to AGMA or the profession, or persons in sympathy with the objects and purposes of AGMA may be awarded Honorary Membership with approval of the Board of Governors. Any active member who has served

as an Officer and/or a Member of the Board of Governors for no fewer than twelve (12) years, or any member who in the opinion of the Board of Governors has performed a qualifying distinguished service to AGMA, is entitled to Life Member status. Former Active members who are no longer working in the field and who do not pay the annual basic dues are coded as Inactive. Only members having a status of Active or Life are permitted to vote in AGMA elections and contract ratifications.

Area Code	Area Name	States
01	New York	Connecticut, New Jersey (Northern), New York, and Outside the United States
02	Southern California	Arizona, California (Southern), Hawaii and New Mexico
03	Chicago/Midwest	Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin
04	San Francisco	California (Northern), Colorado, Nevada and Utah
05	New Orleans	Alabama, Arkansas, Louisiana, Mississippi and Tennessee
06	Philadelphia	New Jersey (Southern) and Pennsylvania (Eastern)
07	Washington /Baltimore	Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington D.C. and West Virginia
08	Pittsburgh	Pennsylvania (Western)
09	New England	Maine, Massachusetts, New Hampshire, Rhode Island and Vermont
10	Texas Area	Texas and Oklahoma
11	Northwest	Alaska, Idaho, Montana, Oregon, Washington and Wyoming

**Table 1: AGMA Regional Areas**

Artist members may have multiple addresses and AGMA must keep track of address changes, as well as, the names and contact information for the artist’s business manager, agent, or other personal representatives, if any.

AGMA is the smallest of the talent unions which also include American Federation of Television

and Radio Artists (AFTRA), Screen Actors Guild (SAG), American Guild of Variety Artists (AGVA), Actors’ Equity (AE), and American Federation of Musicians (AFM). AGMA needs to keep track of whether or not one of its members is also affiliated with another talent union. One thing that sets AGMA apart from the other unions is that it doesn’t prohibit members from working non-union jobs. This gives a performer the freedom to work in other venues or capacities without limitation.

AGMA members are assigned to a regional Area Code. A member's regional area is determined by their principal residential address unless the member designates a different area based on their pattern of employment. The eleven areas are listed in Table 1.

**2.4 Initiation Fee**

After an Application for Membership is approved and the new member data is recorded, the Membership Department forwards a copy of the application form, the \$78 basic dues payment and the initiation fee arrangement/payment to the Accounting Department. The Accounting Department creates a Receivable entry for the \$500 initiation fee owed by all new members. Other receivable related information for the entry includes: a unique identification number (ReceivableID), MemberID, date, dollar amount and ReceivableTypeID (with the code “IF” identifying the entry as an initiation fee). The paid-to-date amount is set to zero when the receivable is entered and is updated when an initiation fee payment is received.

Most members include a payment for the initiation fee with their membership application while some defer the initiation fee payment. If the new member’s initial contractual compensation is greater than \$2,000, the initiation fee of \$500 is due by the first performance date of the production. If the contractual fee is less than \$2,000, the Artist may pay the initiation fee in installments (partial payments equal to 12.5% of their gross compensation until the balance is paid off. Regardless of the level of compensation, the member must pay off the initiation fee balance within 36 months.

**2.5 Basic Dues**

The initial payment of \$78 accompanies the copy of the membership application that is sent to the Accounting Department. AGMA members are required to pay this fixed fee of \$78 every year. This is referred to as basic dues. The initial basic dues payment must be submitted before the membership application will be processed. A

receivable entry is created by the Accounting Department in a similar fashion to that for the initiation fee but with a ReceivableTypeID of "BD" for basic dues. Thereafter, a \$78 invoice for basic dues will be sent to each member on December 1<sup>st</sup> each year and a receivable entry is created for each invoice. The annual basic fee is due within 31 days (i.e., January 1<sup>st</sup>). Reminder notices are sent to members who are late or delinquent in paying their basic dues. If an artist joins midyear, they still pay the full \$78 with no proration.

## **2.6 Percentage Dues**

AGMA members must also pay a variable fee, referred to as percentage dues (sometimes also called working dues), amounting to 2% of the first \$100,000 of AGMA covered earnings in a calendar year. The percentage dues are collected through payroll deduction by the signatory companies. The payroll department at each signatory company produces a report or a file that is transmitted to AMGA's Accounting Department along with one check or funds transfer covering the percentage dues withheld from all AGMA members included in that payroll run. The report/file includes the name, social security number, payroll period, gross earnings, and percentage dues withheld for each AGMA member on that payroll run.

## **2.7 Account Balance**

When the member entry is first created, a receivable entry is created with a ReceivableTypeID code of "AB" identifying it as an account balance entry. The sum of all monies owed to AGMA from each member is maintained in the amount field of this entry. Also, if a member makes an over payment on any receivable, the excess amount will be allocated to this account balance entry.

## **2.8 Payment Receipts**

When a payment is received from the member for an initiation fee or basic dues is received, the Accounting Department assigns it a unique number (ReceiptID) and the following information is recorded in the data base: MemberID, receipt date, PaymentTypeID (e.g., check, money order, credit card, etc.), payment amount, and reference number (e.g., fund transfer number, check number, money order number, or credit card confirmation number). The amount of the receipt is then applied/distributed to the open receivable items that are being paid off or having their balance due reduced. The entire payment amount must be distributed exactly in its entirety before the receipt transaction and its distribution are posted.

When processing percentage dues payments received from payroll deductions, the Accounting Department staff creates a receivable entry with ReceivableTypeID of "PD" (percentage dues) for each member on that signatory's report indicating the amount of their percentage dues withheld. When the receivable amounts of all reported members are all entered and their sum equals the paid amount of the signatory payroll deduction payment, the linked batch of entries are posted to the related Receivable, Receipt, and Distribution tables simultaneously.

## **2.9 Board of Governors and Local Area Committees**

The Board of Governors, the governing body of AGMA, is responsible for final approval of all contracts, for the management of union funds, and for protecting all members from unfair or unsafe practices and conditions. Active and Life members are eligible to run for Board positions. The Board of Governors consists of 75 general members plus eight National Officers (President, First Vice-President, Second Vice-President, Third Vice-President, Fourth Vice-President, Fifth Vice-President, Recording Secretary and Treasurer). The Board members serve four year terms with half being elected on two year election cycles. Terms commence on June 1<sup>st</sup> and end four years later on May 31<sup>st</sup>. The 75 general board members are allocated on a pro rata basis by the percentage of active members in each category in each area. For example, New York dancers get to elect 7 board positions because they constitute approximately 9% of the active national membership. In case of death, resignation, or removal of a member of the Board, a successor shall be appointed by the remaining members of the Board to hold office until the next regularly scheduled election is held.

Area Committees in each geographical area are elected by the active members in that area. Each area committee must have an Area Chairperson and may have additional Area Officers. The election cycles and term lengths are determined by the membership in that area. Additional standing and ad hoc committees exist at both the national and local levels.

AGMA needs to maintain the composition of current and past Boards, Area Committees, and other committees, as well as the positions/offices held by each person. The start and end date of each member's term, along with the selection method (election or appointment), and the termination date and reason (term expiration, death, resignation, or removal) must be recorded. AGMA uses the information in this table

to facilitate communication with committee members, sending email announcing meeting dates, and providing other information pertinent to specific committee members.

### 3. ASSIGNMENTS

Students should assume the analyst role, working either for AGMA in the Information Technology department or for a consulting firm providing technical support for AGMA. The analyst's specific responsibilities, requirements, and outcomes vary depending on the class and assignments. Examples of assignments based on this case are provided below. Suggested answers for some assignments are provided in a separate document.

#### 3.1 Process Modeling and System Development Assignments

Courses: Systems Analysis and Design, Database Management, Process Modeling and Analysis

Additional Case Information: Currently, AGMA uses an off-the-shelf accounting package for preparing their general ledger and performing accounts payable operations. The rest of the data are stored on paper, word processing files, and/or electronics spreadsheets. As AGMA continues to grow, the current system is not sufficient to keep up with the requirements.

Requirements: As a system analyst, you are assigned to assist AGMA with a task related to acquiring a new computer-based information system. Specifically, you will...

1. Develop a set of functional and technical requirements for the system.
2. Develop a set of system constraints including budget and time limits for system development. Please provide technical as well as organizational assumptions where appropriate.
3. Develop cross-functional flowcharts, i.e. Swimlane Diagrams, depicting the process flow of AGMA operations related to memberships.
4. Determine different alternatives to system development and software acquisition (e.g. off-the-shelf software package, Enterprise Solution software, in-house development, open source software, etc.). Evaluate pros and cons of each approach pertaining to the AGMA requirements and constraints previously discussed.
5. Justify the best approach to the new system development and/or acquisition. Where possible, please conduct research on potential software vendors and include the information as part of the rationale.

6. Develop an action plan for system development including a network diagram and/or Gantt Chart.

#### 3.2 Data Modeling Assignments

Courses: Systems Analysis and Design, Database Management, and Accounting Information Systems

Additional Case Information: Currently, AGMA uses an off-the-shelf accounting package for preparing their general ledger and performing accounts payable operations. The rest of the data are stored on paper, word processing files, and/or electronics spreadsheets. As AGMA continues to grow, the current system is not sufficient to keep up with the requirements.

Requirements: As a system analyst, you are assigned to assist AGMA with a task related to developing a new computer-based information system to support its membership services. Specifically, you will develop...

1. A set of functional and technical requirements for the system.
2. Data Flow Diagrams
3. An Entity-Relationship Diagram
4. A data dictionary
5. A set of relational tables

#### 3.3 Data Analytics Assignments

Courses: Business Analytics, Business Intelligence

Requirements: You are an intern for the Assistant Director of Operations at AGMA. You have attended Board of Directors meetings and become familiar with the values, missions, and strategies of the organization.

AGMA currently consists of 11 regional areas (See Table 1 above). The Board of Directors is interested in learning how the regional offices perform relative to each other with the possibility of reorganization of the regional areas. Using the information from the case regarding data collected from AGMA operations, create reports comparing the regional offices performances. Specifically, you will...

1. Identify key performance indicators that may be used to evaluate the operations of the regional offices.
2. List data fields required for each key performance indicator.
3. Develop templates for reports.

### 4. REFERENCES

American Guild of Musical Artists. (2016). Retrieved from <http://www.musicalartists.org/>

**APPENDIX A: APPLICATION FOR MEMBERSHIP FORM**

Print Form



**AMERICAN GUILD OF MUSICAL ARTISTS**

1430 Broadway, 14<sup>th</sup> Floor New York, NY 10018-3308 - 212-265-3687 - Fax: 212-262-9088  
membership@musicalartists.org - http://www.musicalartists.org

*Affiliated with the AFL-CIO, Branch of Associated Actors and Artistes of America*

**Application for Membership**

<b>Professional Name (Print):</b>			<b>Social Security Number</b>		
_____	_____	_____	_____	_____	_____
Last                                      First                                      Initial					
Date of Birth (MM/DD/YYYY): _____			<input type="checkbox"/> Female <input type="checkbox"/> Male		

Please complete the following (Indicate one):

- Soloist                       Chorister                       Dancer                       Choreographer  
 Stage Director               Stage Manager               Actor/Supernumerary

Singers (List Voice Category): \_\_\_\_\_

**Legal Name:**

\_\_\_\_\_ Last                                      First                                      Initial

**Mailing Address:**

Street Address (line 1) \_\_\_\_\_ Citizen of: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Street Address (line 2) \_\_\_\_\_ Alt. Phone: \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Email: \_\_\_\_\_  
Country \_\_\_\_\_

Name & Address of Manager and/or Personal Representative (if any):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name of Initial Employing Company: \_\_\_\_\_

Are you a member of any of the following organizations? If so, place "P" beside the organization that is your parent; and place "A" beside any organizations that are affiliates.

\_\_\_ A.F.T.R.A.      \_\_\_ S.A.G.      \_\_\_ A.G.V.A.      \_\_\_ ACTORS' EQUITY      \_\_\_ A.F. of M.

<b>(For office use only)</b>	
Membership #: _____	Date : _____

## SUMMARY OF CONSTITUTIONAL PROVISIONS GOVERNING MEMBERSHIP CLASSIFICATIONS

### Classifications

All members shall be divided into nine (9) classes, to wit: Active Solo Members, Active Stage Directors, Active Stage Managers, Active Chorus Members, Active Choreographers, Active Dancers, Honorary Members, Charter Members, and Active Life Members for Distinguished Service to AGMA.

### Active Members

All Solo artists, including stage directors, stage managers and all singers and dancers who have performed or who intend to perform for compensation within the jurisdiction of The American Guild of Musical Artists, and who are paid-up members.

## INITIATION FEES AND DUES

### Initiation Fee

The Initiation Fee is \$500.00.

Partial Initiation Fee: All new members are required to pay the first \$78 Basic Dues within one week of their first contracted rehearsal, or upon submission of their Membership application, whichever comes first. If the contractual fee is greater than \$2,000, the Initiation Fee is due by the contract's first performance date. If the contractual fee is less than \$2,000, the Artist may pay the Initiation Fee in installments (partial payments equal to 12 ½ % of AGMA contractual gross compensation) preferably within one year of application and definitely over a period not to exceed 36 months.

If the Artist is applying for membership without having received an AGMA contract, the Initiation Fee is due in full upon submission of the application.

### Dues

Basic Dues in the amount of \$78 are billed annually and are due by January 1.

Working Dues (The Check-Off System): All members working under AGMA Collective Bargaining Agreements will have 2% of the first \$100,000 gross income deducted from their compensation ("Check-Off") and remitted by the employer to AGMA according to the terms of the Collective Bargaining Agreement.

I hereby apply for membership in the AMERICAN GUILD OF MUSICAL ARTISTS, INC., and agree to be bound by each and every provision contained in the constitution of the American Guild of Musical Artists, Inc., by such amendments to said Constitution as may hereafter be made, by any and all Bylaws to said Constitution whether now in force or hereafter enacted, and by any and all rules and regulations adopted by the Board of Governors of the American Guild of Musical Artists, Inc., whether now in force or hereafter amended, enacted, or adopted. I agree that the said amendments, Bylaws, rules and regulations are binding upon me as of the date of their lawfully taking effect, regardless of the rights, if any, vested in me prior to such date.

I hereby authorize the American Guild of Musical Artists, Inc., to be my exclusive agent for collective bargaining purposes in any matter dealing with Opera, Concert, Recital, and Ballet, or in any other matters within the jurisdiction of the American Guild of Musical Artists, Inc.

I affirm that I have truthfully answered the questions on the reverse side hereof.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date