

## **Teaching Case Jay's Collectibles**

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### **ABSTRACT**

There is growing interest in collectibles of many types, as indicated by the popularity of television programs such as the History Channel's *Pawn Stars* and *American Pickers* and the Public Broadcasting Service's *Antiques Road Show*. The availability of online auction sites such as eBay has enabled many people to collect items of interest as a hobby and to sell parts of their collection as a business or for extra income. As a collection grows, it becomes increasingly difficult to track through manual methods, and it is often useful to develop a computer-based system for this purpose. This case raises the possibility of developing an information system to manage a collection of sports autographs. This case may be used in a systems analysis and design, database, or systems development course to address a number of important topics such as: systems scope identification, problem and opportunity analysis, requirements analysis, data modeling, and application development. The case is designed to provoke interest and raise a sufficient level of complexity to challenge students to apply a range of systems development and database concepts. While the case addresses sports collectibles, its concepts may be applicable other types of systems, especially those involving other types of collections or "one of a kind" items. Since many students are likely to have at least some experience using online auction sites, following professional sports, seeing television programs about collectibles, or attending flea markets where collectibles are sold, the case builds in some way on their life experience. This teaching case enables students to discover how systems development and database concepts are applicable to a practical problem solving scenario.

**Keywords:** Case study, Systems analysis and design, Data modeling, Team projects

### **1. CASE SUMMARY**

Jay Wilson began collecting sports autographs as a hobby in the late 1960s as a young boy. Over several years, he was able to amass a collection of more than one thousand autographs mostly by writing to sports stars and requesting their autograph on pictures, sports cards and other items. After this, Jay's interest in autograph collecting went dormant for decades until he decided to restart his collection in the late 1990s. Since football was his favorite sport, Jay decided to focus his interest on collecting the autographs from as many members of the Pro Football Hall of Fame (HOF) as he could. While the collection Jay built as a child provided good progress toward this goal, online auction sites

now offered another means to acquire autographs. At this time, it was also still possible to collect the signatures of players or former players free of charge through the mail, but fewer players honored these requests than decades earlier. Jay decided it would be fun to involve his young son, Adam, in the hobby of collecting sports autographs. Through mail requests and purchasing items mostly through online sources, the father-son team was able to expand their collection by several hundred more autographs. Today, Jay estimates that their collection totals more than 1500 signatures, and they have autographs for more than three-fourths of the members of the Pro Football HOF, but the truth is, he does not really know. As the collection has grown, Jay has found it increasingly difficult to keep track of

it by memory and hand written notes. He knows he needs a more systematic approach to track and summarize the items in the collection, estimate their value, and have better information for purposes of acquiring or possibly selling items.

It is now the beginning of summer. Years have passed, and Adam is a junior in college majoring in Information Systems and he is home for the summer. For some time, the father-son team has talked about how great it would be to have an information system to manage their HOF autograph collection. They have finally decided to stop talking and make it a reality. They figure that developing the system would be a good opportunity for Adam to apply skills he has learned in school and gain practical systems development experience he can put on his resume. While the Wilsons have a variety of sports autographs and memorabilia in their collection, they have decided to focus this system on their main collecting interest: their Pro Football HOF autograph collection. As a starting point, they have assembled an Excel spreadsheet that contains information about all current members of the Pro Football HOF; some sample records from this spreadsheet are shown in the Appendix.

## **2. CASE TEXT: JAY'S COLLECTIBLES**

Jay Wilson began collecting sports autographs in the late 1960s as a young boy when his older brother, Roger and his friend Corey got him interested in the hobby. At this time when the cost of postage was just at a fraction of what it is today and the hobby of collecting sports memorabilia was far less commercialized, Jay wrote letters to many of his favorite sports stars requesting their autograph on sports cards, index cards, photos, and other items. To his initial surprise, many stars answered his letters, sending their autograph back free of charge and sometimes even including a short note or additional autographed pictures. Over several years, Jay was able to build up a collection of more than one thousand autographs from players in professional football, baseball, basketball and hockey, including many stars.

When Jay was a teenager he developed other interests and stopped autograph collecting for what would become more than two decades. Over that time, Jay stored his collection in two shoeboxes and a few binders in his closet and thought little about it as he completed college, got a job, and married. Eventually in the late 1990s, Jay's interest in autograph collecting returned. One day while showing his collection to a friend Jay began to realize it was something special that probably few other people had. He also saw that some of the autographs he had in his collection were from classic stars, some of whom were now deceased. He knew they must be worth some money and he was curious how much.

Jay realized he was a collector at heart. He remembered the excitement he felt as a child when famous sports stars returned their autographs to him in the mail. Jay decided he would now restart his hobby with his young son, Adam. Together they would collect a few hundred more autographs over the next several years. By this time websites had sprung up to help hobbyists build their collections. One site, [www.sportscollectors.net](http://www.sportscollectors.net), allowed the Wilsons to obtain the mailing addresses of current and retired players and to

determine which players were most likely to honor mail requests so they could target their mailings. In addition, online auction websites such as eBay made it much easier to find and purchase items for a collection that could not be obtained through other means. Jay and Adam also obtained additional signatures in-person at sporting events, team training camps, stores or sports cards shows. Most of the items in their collection have one signature on them, but others have more. For example, the autographs of several players might be obtained on an item such as a team program, when signatures are collected before or after a sporting event.

The father-son team decided to focus their collecting efforts on football since it was their favorite sport. In fact, they set a collecting goal to obtain the signatures from as many members of the Pro Football Hall of Fame (HOF) as they could. Today, Jay estimates that they have more than three-fourths of the autographs of Pro Football HOF members, but the truth is, he does not really know. Jay has kept few records of his collection, preferring instead to rely on memory or a few hand-written notes that sometimes get lost or misplaced. As the collection has grown, it has become increasingly difficult for Jay to remember what items he has or does not have in his collection. This has sometimes led to unwanted circumstances such as purchasing a "duplicate" autograph, i.e., an autograph of a HOF member that is already in the collection. In other cases, the Wilsons have missed out on some online auction deals, thinking they had an autograph of a certain player in their collection when they did not.

The "bottom line" is that Jay knows he needs a better approach to track the items in the collection. He also knows the collection contains some duplicate items that he would like to sell on eBay to earn extra money. Jay believes that an information system would help to facilitate online sales since it could be used to identify duplicate items, provide information for creating online item listings, and help estimate the value of items for sale.

There are also many questions that Jay would like to know the answers to about his collection that a computerized system could answer. Among these questions are: how many total items are in the collection? What is their estimated value? What is the value of some specific items such as the rarest autographs in the collection? What percentage of HOF members do the Wilsons have autographs for? What specific HOF members do they have in their collection? Which HOF members' autographs do they still need? How much have they paid in total for items that they have purchased for their collection? Of course a computer-based system would also be able to provide many other breakdowns of information such as tracking the autographs in the collection by team, year of HOF member induction, and position. Other important background information to consider in developing this system is presented next.

### **2.1. A Primer on Football Autograph Collecting**

Some autograph hobbyists collect anything "they can get their hands on," while others are more selective in collecting signatures for only certain sports, time periods, positions, teams, types of items, or some combination of these. For

example, some hobbyists may concentrate on collecting only HOF signatures while others seek autographs from both HOF and non-HOF players. A dedicated fan of a certain team may only be interested in collecting autographs of that team. Another collector may only collect signatures of a certain position such as quarterback. Still another hobbyist may limit his collection to quarterbacks of a certain era, such as those playing before World War II. Thus, the collecting possibilities are almost endless. In addition, it is common for collectors to limit their focus to certain types of autographed items. For example, some hobbyists enjoy collecting autographs on hardware-related items such as footballs, helmets, jerseys, or mini-helmets. Other collectors may only be interested in paper-based items such as autographed 8 X 10 photographs, 3 X 5 index cards, football cards, team programs, or goal line art cards, which are 4 X 6 artist drawings of players.

As noted earlier, this system will focus on tracking the Wilsons' Pro Football HOF autograph collection. It can be assumed that this collection contains only paper-based items. The collection began decades ago using items that could be shipped easily through the mail to players, and it has continued to maintain a paper-based focus. Jay has never been interested in collecting autographs on larger items such as footballs or jerseys since he feels they take up too much room.

## **2.2. Autograph Valuation**

Like many types of collectibles, the value of a particular item largely depends on the forces of supply and demand, and it is impacted by a number of factors. The autographs of star players and players in the Hall of Fame, whose fame is immortal, tend to be in greater demand and worth more money than the signatures of common players who did not achieve notoriety. The autographs of players who live a long life and are prolific signers, signing at autograph shows and/or in response to mail requests, tend to be in greater supply (and worth less money) than players who die relatively young or those who rarely sign autographs. A player's popularity also has an effect on the demand and value of a signature. For example, since quarterbacks have the highest profile position and are the best-known, their signatures tend to be in greater demand than players who command less attention such as offensive or defensive lineman. Finally, the autographs of historic football legends may be quite valuable since many collectors desire them but relatively few signatures exist. For example, an autograph of Jim Thorpe whose larger than life statue adorns the entrance of the Pro Football Hall of Fame is worth hundreds or even thousands of dollars.

Several other factors also affect a signature's value. A signed 8 X 10 photo of a player is generally worth more than a signature of the same player on a piece of paper, 3 X 5 index card or most football cards. An autograph signed with a permanent marker is usually worth more than a signature from the same player in ball point pen or pencil. Of course, it should be noted that since autographs signed decades ago were commonly signed in ballpoint or fountain pen, these items may still be worth a lot of money due to the scarcity of certain players' signatures. The condition of an autograph can also affect its value. If part of a signature is cut off,

smudged, extremely sloppy, written in pencil, or dedicated to a specific person, it tends to reduce the value of the autograph. In contrast, an inscription added to a signature can increase its value. For example, a player might add the inscription "HOF 2002" to indicate he was elected to the Hall of Fame in 2002, or "Super Bowl MVP, 2005" if he won the Most Valuable Player Award in the 2005 Super Bowl.

The authenticity of an autograph is a major factor affecting its value. Signatures that have been authenticated by a reputable source command a premium price. Companies such as PSA/DNA or James Spence Authentication examine and authenticate an autograph for a fee (PSA/DNA, 2010; JSA, 2010). If their inspection determines an autograph is authentic, they will issue a "Certificate of Authenticity" (COA) that includes a certificate number for the item.

For purposes of this system, the Wilsons will use the *Sander's Autograph Price Guide, 7th Edition*, as a starting point to estimate the value of each item in the collection before it is entered into the system (Saffro, 2009). This guide provides an estimate of the retail value of the autograph of each HOF member on various types of media such as 8 X 10 photographs, football cards, 3 X 5 index cards and so on. Where necessary, the Wilsons will adjust the value of some items upward or downward from the *Sander's Guide* estimate based on factors such as condition, or whether it contains an inscription or dedication. For example, if the *Sander's Guide* estimates a signed 3 X 5 index card for a certain player at \$25, Jay might reduce the value of this item to \$20 if it is dedicated to a specific person (e.g., "To Jill") since a personalization is generally thought to make an item somewhat less valuable. Conversely, the value of an autograph from the same player on the same medium that contains no dedication and an inscription such as "HOF, 2002" may be adjusted upward to \$30.

## **2.3. HOF Member Information**

As a starting point toward developing this system, the Wilsons have assembled information about all members of the Pro Football HOF in the form of an Excel spreadsheet using publicly available website information (PFHOF, 2011; Wikipedia, 2011; sportscollectors.net, 2011). Sample entries of this worksheet are shown in the Appendix. This list is current for the 267 members of the HOF through mid 2011. According to current HOF election procedures, four to seven new HOF members are elected in February each year.

As shown in the Appendix, each record in the data file contains an entry number, the HOF member's first and last name, the beginning and ending year of the position(s) for which he is enshrined, his playing era (i.e., "pre modern era," or "modern era"), primary team(s), college(s), enshrinement year, state of birth, and life status (living or deceased). Since players sometimes change teams over the course of a career, more than one column is provided for primary team; in fact, a member may have up to three "primary teams." Other teams with whom a HOF member may have spent a minor portion of his career, i.e., "secondary team(s)," are not recognized in the data file. Also, only the current name of the 32 National Football League team franchises is shown; if a team has changed its name or location over time, the current

name is recognized. For example, if certain HOF members played for the St. Louis Cardinals their team is listed as the Arizona Cardinals since this franchise moved from St. Louis to Arizona. Those HOF members who played for and were enshrined with a team that no longer exists, such as the Canton Bulldogs, are shown in the data as having “No Current Franchise.”

Since some HOF members attended more than one college, multiple columns are also provided in the spreadsheet for “college.” While the sample worksheet in the Appendix shows only two sample columns for college in order to fit the Appendix on a single page, there are four “college” fields in the spreadsheet file. The life status column is included to enable the Wilsons to target only living HOF members for autograph mail requests.

It must be noted that a few HOF members have more than one entry in this spreadsheet because they have been inducted into the HOF for more than one position. The term “position” is used by the HOF to denote not only player positions such as Quarterback or Defensive Lineman, but also non-player roles such as “Coach” or “Contributor,” e.g., football pioneers, league officials, or commissioners. As of 2011, there are 267 members of the Pro Football Hall of Fame. There are 275 entries in this spreadsheet because some members (Curly Lambeau and George Halas) are listed as having three positions while a few others (Guy Chamberlin, Jimmy Conzelman, Ray Flaherty and Steve Owen) have two positions. It should also be noted that a member who is inducted for more than one position may have different teams associated with each position. For example, Ray Flaherty was inducted into the HOF as a Receiver with the New York Giants from 1926-1935 and as a Coach with the Washington Redskins from 1936-1949.

This spreadsheet serves as valuable “master list” of HOF members that will help the Wilsons track their collection. This list, which will need to be updated annually to accommodate new members, will allow these collectors to summarize their collection in many ways and aid in the acquisition and sale of items.

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**APPENDIX. Sample HOF Member Information**

Entry No.	First Name	Last Name	Beg Yr	End Yr	Era	Position	Primary Team1	Primary Team2	Primary Team3	College1	College2	Ensh Yr	State of Birth	Life Status
225	Herb	Adderley	1961	1972	ME	Defensive Back	Green Bay Packers			Michigan State		1980	Pennsylvania	Living
68	Troy	Aikman	1989	2000	ME	Quarterback	Dallas Cowboys			Oklahoma	UCLA	2006	California	Living
42	Marcus	Allen	1982	1997	ME	Running Back	Oakland Raiders			Southern California		2003	California	Living
240	George	Allen	1966	1977	ME	Coach	St. Louis Rams	Washington Redskins		Alma College	Eastern Michigan	2002	Michigan	Deceased
82	Lance	Alworth	1962	1972	ME	Receiver	San Diego Chargers			Arkansas		1978	Texas	Living
172	Doug	Atkins	1953	1969	ME	Defensive Lineman	Chicago Bears			Tennessee		1982	Tennessee	Living
76	Morris (Red)	Badgro	1927	1936	PME	Receiver	New York Giants			Southern California		1981	Washington	Deceased
215	Lem	Barney	1967	1977	ME	Defensive Back	Detroit Lions			Jackson State		1992	Mississippi	Living
6	Cliff	Battles	1932	1937	PME	Running Back	Washington Redskins			West Virginia Wesleyan		1968	Ohio	Deceased
20	Sammy	Baugh	1937	1952	PME	Quarterback	Washington Redskins			Texas Christian		1963	Texas	Deceased
126	Chuck	Bednarik	1949	1962	ME	Offensive Lineman	Philadelphia Eagles			Pennsylvania		1967	Pennsylvania	Living



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ISSN 1055-3096