**[Assignment 4.3 - Group Case Study (Post to your Group Forum and Final Submission to this link)](https://cyberactive.bellevue.edu/webapps/blackboard/execute/uploadAssignment?content_id=_6608142_1&course_id=_327420_1&assign_group_id=&mode=view)**

Working as a group, discuss the Week 4 (Chapter 7) portion of your Case Study and complete the deliverables. Use your group forum to exchange ideas and files as you are working on this assignment.

You should be using the Willowbrook School case study which can be accessed in the Course Documents area of your course.  Use your group forum to exchange ideas and submit draft work. When your deliverables are completed, save them to a single Word document and attach a copy of the document to this Assignment for grading.

You will be graded on both the submitted group's answers and on individual participation according to the attached Rubric. **EVERYONE HAS TO SUBMIT THE FINAL OUTCOMES TO THIS ASSIGNMENT TO EARN CREDIT FOR THIS GROUP ASSIGNMENT.**  All group submissions should be the same for everyone in the group.  Take part in the group discussion and output.  It only works if you all take part in your group assignments!

Submit the diagrams and answers to the questions given.  The answers should be in paragraph form, double spaced, and in APA format.  Save your document in MS Word format and attach it to this assignment.  Please make sure you spell and grammar check the document before submittal, as errors in this respect will be deducted from the total points earned.  Correctly cite any sources you use.  This assignment is due by the end of the academic week.

**Case Background**

Willowbrook School is a small, private school in the Midwestern United States. For the past 20 years, it has offered a curriculum for preschool through grade 3. It also offers after-school care, usually referred to as after care, on premises. Last year the school added a new classroom to allow the curriculum to expand to provide a grades 4–6 program. Willowbrook is experiencing significant increases in enrollment applications for all programs from pre-school through the grades 4–6 program. Increases in applications coupled with the expanded program and increased demand for after-school care have led to a very high workload for the administrative person on staff. The principal and teachers have stepped in where possible, but the demand is becoming too great. Willowbrook School is a non-profit, and is not in a position to hire another full-time administrative position, which is what the principal and administrator think would be needed to handle the increased workload.

You are an independent IT consultant, specializing in developing IT solutions for small business needs. You have been contacted by the parent of one of the students to speak to the school principal, administrator and teaching staff about the possibility of setting up an information system to handle some of the school’s administrative and financial tasks. While there is not money in the budget to add a full-time position, the school does have a very active board of directors and parent committees that are experienced and enthusiastic about fund-raising for projects that do not fit into the budget. It is the hope of the school that it might be feasible to use a combination of grants and fund-raising to cover the initial cost of purchasing and setting up an information system, and the ongoing cost of a part-time support position for the system.

The paid staff of the school is as follows:

Kathy Gilliard is the principal of Willowbrook. She has been at the school for 9 years, and is a certified teacher. Kathy handles the academic and curricular issues that arise, and ensures that the school meets all federal and state educational standards. She also deals with issues related to the school’s non-profit status. Kathy and the teachers who report to her make decisions jointly about admissions and assignments to classrooms. Kathy handles payroll for teachers and teacher aides. Kathy also substitutes in any of the school classrooms when a teacher is out.

Susan Brown is the vice-principal. She is responsible for the after-care program. She has traditionally handled or been responsible for all administrative tasks related to tuition and after-care fees. Susan sends out monthly bills for tuition and after-care, records payments and handles bank deposits. While students must be pre-registered for after-care required on a daily basis, the school does offer “drop-in” care on an “as space allows” basis. Susan handles all requests for drop-in care in consultation with the after-care teachers, and adjusts monthly bills accordingly. She also maintains the school calendar, prepares handouts and reminders for parents, and administers the “camps” that run during the two weeks that the school is not in session during the spring, and the summer programs that run through July and August. She maintains all student records, and ensures that contact and pick-up lists for all classrooms and after-care programs are up-to-date. She also handles payroll for the after-care teachers and part-time assistants in the after-care programs. Currently Susan handles all her responsibilities using Microsoft Word and Excel. She is comfortable with the applications, but finds that maintaining records and producing reports, payroll, etc. results in a lot of duplication of effort, as she has to copy a lot of information from one worksheet or document to another.

There are six full-time teachers at Willowbrook, three for the pre-school-kindergarten program, two for the grades 1–3 program, and one for the grades 4–6 program. There are five teachers aides, for the pre-school-kindergarten and the grades 1–3 programs. Teacher’s aides report to their respective teachers. Enrollment in the grades 4–6 program does not warrant the hiring of a teachers aide at this point in time, but it is expected that an aide will be hired next year, when all three grades of the program will be populated. Each teacher is responsible for keeping attendance records and recording them in the student files.

There are two full-time after-care teachers, one for the pre-school-kindergarten group, and one for the primary grades. After-care teachers report to Susan Brown. Each after-care teacher has part-time assistants assigned to the program. Assistants report to the after-care teacher. The number of students pre-registered in the after-care program determines the number of assistants. The after-care teachers are responsible for keeping time sheets for their part-time assistants and submitting them every two weeks to Susan Brown. In addition, the after-care teachers are responsible for submitting weekly summary sheets to Susan Brown detailing any hours above those pre-registered for that students spent in the after-care program, so that parents are billed for the additional time.

Like many other non-profit schools, Willowbrook relies on volunteer time from parents to accomplish many of the tasks essential to the running of the school. A financial committee examines monthly financial reports, a fund-raising committee evaluates possible fund-raising projects and handles approved fund-raising. In addition, individual parents step in as needed to do rote office tasks such as copying and distributing handouts, to free up Susan Brown for other tasks. Parents also fill in as assistants in the after-care programs when needed, and qualified parents step into the classroom as teachers aides whenever possible to reduce the reliance on substitute teachers.

**Week 4 – Case Study Assignments - Chapter 7**

Here are your group assignments for Week 4:

**Background**

Based on your earlier recommendations, Willowbrook decided to continue the systems development process for a new information system that would improve operations, decrease costs, and reduce some of the administrative workload.

Now, at the end of the systems analysis phase, you are ready to prepare a system requirements document and give a presentation to the Willowbrook School staff. Many of the proposed system’s advantages were described during the fact-finding process. Those include smoother operation, better efficiency, and more user-friendly procedures for staff and parents.

You must examine tangible costs and benefits to determine the economic feasibility of several alternatives. The finance and fund-raising committees will need to examine the costs and benefits to determine if the development process will go ahead. If Willowbrook School decides to go ahead with the development process, the system either can be developed in-house or a vertical package can be purchased and configured to meet the needs of the school.

Currently, Susan Brown is logging 30 hours of overtime a month to accomplish the increased workload associated with increased enrollment and school expansion. She is being compensated for overtime at the rate of $12 per hour. Based on current enrollment projections, the overtime will need to be expanded to 70 hours a month for the billing requirements for the next school year as the final grade in the 4–6 classroom comes online. The overtime requirement would be eliminated if Willowbrook implements the new system. The current system now causes an average of 20 errors per month, and each error takes about 30 minutes to correct. The new system should eliminate those errors.

Based on your research, you originally estimated by working full-time you could complete an in-house development project in about 8 weeks. Your consulting rate, which Willowbrook agreed to, is $50 per hour. If you design the new system as a database application, you can expect to spend about $2,000 for a networked commercial package. One of the parents at Willowbrook has extensive experience with this package as a Database Administrator at a local company, and has committed to providing 15 hours per week working with you to develop the project. You have agreed to reduce your estimate to 25 hours per week for 8 weeks to take advantage of this offer. After the system is operational and the staff is trained, you hope that Willowbrook staff and volunteers can handle routine maintenance tasks without your assistance.

As an alternative to in-house development, a vertical software package is available for about $7,500. The vendor offers a lease-purchase package of $2,500 down, followed by three annual installments of $2,500 each. If Willowbrook buys the package, it would take you about three weeks to install, configure, and test it, working full-time. The vendor provides free support during the first year of operation, but then Willowbrook must sign a technical support agreement at an annual cost of $500. Although the package contains many of the features that Willowbrook wants, most of the reports are pre-designed and it would be difficult to modify their layouts.

You have agreed to provide five hours per week of training and support for the first two months of operation. After the new system is operational, it will need routine maintenance, file backups, and updating. These tasks will require about four hours per week and will be performed by school staff or parent volunteers.

For both the in-house development and the vertical software package, the necessary hardware will cost about $3,000. Hardware and network installation will be provided by three parent volunteers.

In your view, the useful life of the system will be about five years, including the year in which the system becomes operational.

The development of the new system will occur in Year 0, but the system will not be used until Year 1. The school will use the manual system during development, and will switch over to the new system during the month of June, to start the new school year on the new system.

**Assignments**

You scheduled a presentation to Willowbrook School in one week, and you must submit a system requirements document during the presentation. Prepare both the written documentation and the presentation. (Note: To give a successful presentation, you will need to learn the skills described in Part 1 of the Systems Analyst’s Toolkit.) Your oral and written presentation must include the following tasks:

1. Provide an overview of the proposed system, including costs and benefits, with an explanation of the various cost-and-benefit types and categories.
2. Develop an economic feasibility analysis, using payback analysis, ROI, and present value (assume a discount rate of 8 percent).
3. Provide a brief explanation of the various alternatives that should be investigated if development continues, including in-house development and any other possible strategies.
4. Suggest a coding scheme for use in the after-care hours report, that would identify which time block(s) are being billed for on any particular day. You will need to refer back to Chapter 4 to review the time blocks available in after care.

When all of the answers for the given project are completed and a consensus is reached, everyone in the group will attach the completed answers to the assignment in the Week 4 assignments area.