National University of Computer and Emerging Sciences, Lahore Campus

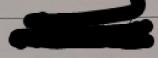|			
Course:	Technical and Business Writing	Course Code:	SS 153
Program:	BS (Computer Science)	Semester:	Fall 2020
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Paper Date:	6th January-2021	Weight:	50%
Section:	ALL		
Exam:	Final		

Instructions: Attempt all questions on the answer sheet.

Q1. Write an Informal Report on the given task:

[20]

Sustaining data security and privacy is of prime importance for any system, particularly in the education sector. In this context, and in the current pandemic situation, when data security has become much more vulnerable to cyber threats, you have observed some potentially weaker areas in your university's data servers (You may assume some possibilities if there are none). Moreover, there have also been some internal instances where the data got few bugs and the stored information was disrupted. Luckily, the backups helped the Lab Support to retrieve and restore everything to normalcy. But, for sure, the university would not be happy to see these happenings again.

Since you do understand the nature of the problem very clearly and want to help the FAST-NUCES to fix such issues through stronger securities and user friendly software or solutions, **write an informal memo-report to the Head of the Computer Science Department (two pages at least), highlighting the security problems at the University servers and on the internal storage devices. You are required to offer some significant solutions you think will help with the situation.**

Q2. Suppose you have been selected for a client-based programming competition organized by the Punjab IT Board and the leading software companies. They have sent you the one-day event schedule. Since you really want to avail this opportunity, but at the same time, you are extremely over burdened with the semester's final phase and there is a three hours exam on the competition's day in the same time slot.

You have two options that you can go for:
   A.   You withdraw from the competition with valid reasons communicated.
   B.   Request them to have your time slot shifted which would be quite inconvenient.

Based on which ever option you choose, **write an email** to the Program Organizer, Dr. Jamil Ahmed Khan, at PITB, (jkhan@pitb.edu.lr), Lahore, to get through the situation you are in.
(Word limit 200 -250 words).

Note: Remember being fair and honest is the key to professional career development. Follow the email writing protocol, of the ABC format for Positive or Negative Messages, whichever you think renders necessary, in this situation.

[15]

Q3. Write a job application/cove letter to the HR Manager, responding to the job advertisement, given below.
(Word limit 200 -250 words)

Follow the ABC format of a Cover Letter. You may fictionalize some part of the information about your degree program and other experiences not yet acquired. This way, the job letter and résumé reflects the background you would have if you were applying for the job.

Q4. Read the extracts of a formal research report given below. Develop your understanding of the research idea, its practicality, implications and usefulness. Then write down the answers for the required questions at the end of this text.

A. Write an Abstract for this research report within 150 – 200 words. Also write 4 Key Words. [10]

B. From your perspective of understanding, write the best suitable Title. [05]

C. How could this area of research be further useful in designing computer science applications for Pakistan under the current Covid-19 situation? Write a short paragraph (120 words) expressing your opinion with strong reasons. [10]

'Information and Communication Technology' (ICT) has played a vital role at the organizational level in transforming the 'operational practices' as well as 'electronic services' in both the public and private sectors (Basahel, Yamin, and Drijan, 2016). In the Middle East, Saudi Arabia is one of the largest markets for Enterprise IT products and services. Cloud Computing compared to traditional client server architecture, provides IT solutions through virtualization, service-oriented architecture, multi- tenancy and autonomic computing technologies. Accessing services via the cloud is attractive as businesses are invoiced based on consumption and there is little need for workforce to provide onsite support. Cloud Computing has eliminated the need for on-site database, software, and server support. In recent years, Small and Medium-sized Enterprises (SMEs) have increased their investment in IT. Despite, the government's push in encouraging IT adoption, Saudi Arabia is still in the early stages of development. According to Amron, Ibrahim, and Chuprat (2017), the implementation of e-Government in Saudi Arabia has been delayed due to the weaknesses in the ICT infrastructure. The legal terms and conditions as well as appropriate resources are factors that delayed the Cloud Computing implementation in Saudi Arabia. It has been found in Basahel, Yamin, and Drijan (2016) that Saudi Arabia's current Revised Cloud Computing Regulatory Framework and strategies are helping them to accomplish quality outcomes in a timely manner. In the context of Saudi Arabian SMEs, many factors and conditions influence the decision to switch from an existing system to the cloud. Karim and Rampersad (2017) suggested that the decision is affected by the lack of knowledge and awareness. According to Alanezi (2018) Saudi Arabia has identified its product-manufacturing sector as one of the core drivers of the envisaged economic growth, with manufacturing continues to be a major contributor to its Gross Domestic Product (GDP). In 2018, the manufacturing and retail sectors continue to account for nearly half of all enterprises at 452,900 in total. The manufacturing sector accounts for approximately 103,700 enterprises. In Saudi Arabia, around 950,000 SMEs were registered in 2016 providing one million Saudis with employment (Raut et al., 2018). (GASTAT, 2016) predicted that in 2030 the number of SMEs in Saudi Arabia will be increased from 20% to 35%. In this fast-developing technology, business dynamics changes and there is a need to continuously update research so that appropriate support polices can be in place to address adoption barriers.

s research aims to identify the barriers commonly faced by manufacturing SMEs of Saudi Arabia in adopting or migrating to Cloud Computing, using the qualitative research approach. Since Saudi culture is very different from the west, qualitative research allows a deeper investigation of adoption barriers specific to the Saudi Arabia context. SMEs are usually unaware of the risks and barriers that they might face during the transition, and thus, they often face severe consequences and ultimately fail to adopt Cloud computing appropriately, Ibrahim, and Chuprat (2017). The findings will enable the SMEs in the manufacturing sector of Saudi Arabia to gain a better understanding about the challenges of Cloud Computing adoption. This can pave the way to enable Cloud adoption, and contribute to the Saudi Arabia 2030 Vision.

According to a survey by the 'International Data Corporation' (IDC), the most common barrier to the adoption of Cloud Computing that concerns SMEs in Saudi Arabia is security and privacy (Raut et al., 2018). As they are less likely to control and own data, SMEs are usually hesitant to adopt Cloud Computing. Similarly, Al-Ruithe and Benkhelifa (2017), Al-Ruithe, Benkhelifa and Hameed (2017) indicate that the most common concern to the transition to Cloud Computing is privacy and security due to the lack of a physical structure. Almubarak (2017) reflects that the lack of trust of potential cloud services consumers is the main obstacle to adopting Cloud Computing. The work focuses on the fact that SMEs have less control over their data and are usually unaware of who is accessing their confidential data, resulting in trust issues. Due to the governmental laws and regulations that pertain to the storage and access of data on the Cloud, Saudi SMEs are hesitant to migrate to Cloud Computing. (AlBar and Hoque, 2019) suggests that availability and reliability are the main barriers that SMEs in Saudi Arabia tend to face.

This study aims to identify the barriers commonly faced by manufacturing SMEs of Saudi Arabia in adopting or migrating to Cloud Computing. The chosen research method is qualitative. The primary data collection is semi-structured interview. This helps the researcher to assimilate rich data from the participants. The interview instrument is a set of open-ended questions that help the researcher to gather personal opinions regarding Cloud Computing. The semi-structured interviews were focused on identifying the barriers faced by manufacturing SMEs of Saudi Arabia. The sample was of 16 Information Technology (IT) managers from manufacturing SMEs within Saudi Arabia.

From the analysis, the challenges and barriers retarding the endorsement of Cloud Computing by Saudi manufacturing SMEs include security, privacy, and lack of knowledge about the cloud, lack of governmental and top management support, provider lock-in, data control, service cost, and sufficient bandwidth.

Theme A: Security
In terms of the adoption of Cloud Computing, security is considered the foremost barrier that is still challenging for manufacturing SMEs in Saudi Arabia. The prime reason behind SMEs' fear of and lack of interest in the implementation of Cloud Computing is security concerns as there are no current standards.

Theme B: Lack of Top Management Support
The top management often does not show any concern or interest in the advancement of technology and there is a lack of interest in adopting cloud solutions. This becomes a huge barrier.

Theme C: Data Control
SMEs fear they lose their control of the data in the Cloud. Hustad and Olsen (2016) reflect that SMEs cannot accessing and controlling their data is a potential barrier to the adoption of Cloud Computing in Saudi Arabia.

Theme D: Privacy
In the study of Albasri, Mishra and Elbeltagi (2016), the inefficiency in controlling the customers of cloud service is a severe threat towards confidentiality, data integrity, and principles of privacy. The fundamental principles that govern personal data use include fairness, lawfulness, data quality, proportionality, purpose specification, openness, and accountability. These are the basic principles of privacy that are common among legislation of different countries. From the perspective of consumers, Cloud Computing has privacy concerns. As per the survey of Ramachandra, Iftikhar and Khan (2017), around 74% of IT managers responded that the critical challenge that blocks them from using the services of cloud computing are privacy concerns.

Theme E: Lack of Government Support
Lack of government support is another key barrier to SMEs' adoption of Cloud Computing. SMEs in Saudi Arabia do not receive sufficient funding for the transition (Kalaiprasath, Elankavi and Udayakumar, 2017).

Theme F: Service Cost
Due to the high cost of services in Saudi Arabia, it is difficult for SMEs to transition to Cloud Computing, as costs are likely to be higher than those of the existing system. Alresheedi et al. (2018), and Alruithe et al. (2017) further support that the cost of services factor makes SMEs hesitant to adopt new technologies.

Theme G: Lack of 'Cloud' Knowledge
Even there is the popularity and enthusiasm of Cloud within the company, it has been identified that there is a shor
operational skills and cloud knowledge, leading to unsuccessful adoption, barriers, and slower acclimatization in contin
migration (Jouini, and Rabai, 2019). Without expertise and prior knowledge of Cloud Computing, the SMEs cannot mig
their existing systems to the cloud. The adoption of Cloud Computing requires proper training and expertise, which is
barrier to implementing the cloud.

There are barriers and challenges associated with the transition to Cloud Computing. The study found the most common
barriers are security, privacy, service cost, data control, lack of government support, and lack of cloud knowledge and
training. For SMEs in Saudi Arabia, these barriers are critical because Cloud Computing has the potential to unlock new
growth opportunities for business. If prepared correctly, SMEs can easily implement Cloud Computing in their organizations.
The government of Saudi Arabia is playing a significant role in the advancement of ICT in the country. The barriers identified
in this study can help the Saudi government as well as SMEs to develop effective strategies for migrating to Cloud Computing.

Q5. Case Study 1: Read the case and answer the questions that follow: [10]

Case on Presentation Skills: While working with a renowned software house in Lahore, you have been called by
the Director of Human Resources about the employees' ability to effectively deliver their monthly progress
reports on their assigned tasks. This time, the employee presentations would be given in front of an important
foreign delegation from an English speaking country. This client is expected to bring some mega projects to your
organization. Though the staff is technically fantastic, highly motivated, and well experienced, but, they are poor
at presenting. They have rather too much information on their slides and they would read all the content. They
are also nervous, unfocused and often have language mistakes in the content. Such an ineffective performance
before the upcoming client is not acceptable. The Director wants you to train the staff on all the weak areas
identified.

A. **Apart from the above mentioned areas, identify other deficiencies. Enlist the strategies that you
would adapt to develop this program. Support each strategy with one strong reason of training.**
B. **How would you ensure that your presenters would interact with each other in a fun and
collaborative way? Write three practical ways to achieve this goal as well.**

Q6. Case study 2: [10]

Right after graduation in computer science, Tanveer was exploring different job offerings. He got greatly excited
and overjoyed when he received an interview call from a leading software house where he had always dreamt of
working with. During the interview, he must prove himself the best suitable candidate around! The moment came
soon. The interviewers were asking him questions which he was confidently answering, when suddenly a question
was asked on an internship which actually he had never done. Tanveer recalled that just increasing the weight and
content of his resume, he had claimed an internship of three months with a reputed organization. He got blank.
Then, taking a deep breath, he thought of not losing the opportunity with this job by telling the truth. So, he
decided to continue and pretended that he had learnt a lot about professionalism during the internship. He is now
fully prepared for taking a job in this software house and apply the learnt experience in this job. The interview
concluded very amicably and even they asked him the expected salary question. A few days passed and still they
had not asked him to join. Curiously, he phoned them only to learn to a great disappointment that he was not
hired.

A. **What are the issues of integrity and ethics in this case study?**
B. **What options Tanveer should have thought of and availed during the interview? Give strong reasons to
support your point of view.**