**BAIT3273 Tutorial 2**

**Cloud Concepts**

• CapEx vs OpEx

• Public vs Private vs Hybrid Cloud

• IaaS, PaaS, SaaS

**Instructions**

• Please use this document to answer all the questions in this tutorial.

• Rename the file with your student code and tutorial group number. For example, 1909846-BAIT3273-S1-2020-Tut1-RDSG01 with RDSG01 as your respective programme and group number. Besides, replace *XXXXXXXX* at the header with your student code.

• Every student must submit this doc individually at the end of the tutorial to google classroom.

**Task 1: Capital expenditure (CapEx) versus operational expenditure (OpEx)**

In the past, companies needed to acquire physical premises and infrastructure to start their business. There was a substantial up-front cost in hardware and infrastructure to start or grow a business. Cloud computing provides services to customers without significant upfront costs or equipment setup time.

These two approaches to investment are referred to as:

**Capital Expenditure (CapEx)**

**Operational Expenditure (OpEx)**

1.a

• Compare the different between CapEx and OpEx.

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| Answer: |

• The benefits of CapEx.

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| --- |
| Answer:  improve the efficiency of a firm, can allow firms to gain a competitive edge |

• The benefits of OpEx.

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| --- |
| Answer:  Resources can be provisioned and de-provisioned instantly, as needed, without an exorbitant cost attached. This frees up IT operations so it can scale up and down according to the organisation's needs. |

1.b

• Compare Public Cloud, Private Cloud and Hybrid Cloud

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| Answer:  Public cloud is cloud computing that’s delivered via the internet and shared across organizations.  Private cloud is cloud computing that is dedicated solely to your organization.  Hybrid cloud is any environment that uses both public and private clouds.  IMG_256 |

**Task 2: IaaS, PaaS and SaaS**

2.

When talking about cloud computing, there are three major categories. It's important to understand them because they are used in conversation, documentation, and training.

• Compare IaaS, PaaS and SaaS.

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| --- |
| Answer:  Software as a Service (SaaS): The most popular among online retailers, allows merchants to run direct sales applications such as shopping carts in the cloud without their customers having to download or install programs to make a purchase.  Platform as a Service (PaaS): Although not as prevalent in the ecommerce world, PaaS is used for applications and development such as Apprenda, which runs applications like Java.  Infrastructure as a Service (IaaS): Primarily focuses on providing datacenter infrastructure on-demand. Examples include Amazon Web Services used by Netflix to house their database of movie and television offerings. |