**Assignment**

**For each of the following questions, outline how you could use an A/B test to find an answer. Be sure to identify all five key components of an A/B test we outlined above.**

* **Does a new supplement help people sleep better?**

-Obtain a sample with the same sleep habits, age group and gender distribution.

-Divide the sample into 2 groups.

-Subject one group to the supplement and subject have the second group go without supplements.

-Have them fill a questionnaire about how their sleep changed before and after the supplement.

-Ensure that their response was not biased by other factors like geographical conditions, age, etc.

* **Will new uniforms help a gym's business?**

-Obtain a sample from the gym staff with similar characteristics e.g. age group.

-Divide the sample into 2 groups and have some wearing the old uniforms and the other group wearing new uniforms.

-Observe customer responses to the 2 distinct groups of staff

* **Will a new homepage improve my online exotic pet rental business?**

-Get a representative sample from the population.

-Divide the sample into 2 groups; one that will continue to use the traditional page and another that will see the new home page.

-Over time, observe the changes in actual online purchases from the new exotic page.

* **If I put 'please read' in the email subject will more people read my emails?**

-Select a sample that properly represents the population.

-Divide the sample into 2 groups.

-Send one group with emails with “please read” in it and the other group without.

-Observe if the people that received the emails with ‘please read’ were more likely to open and read the email compared to the other group.