

SUMMER TRAINING REPORT

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**MBA - HOSPITAL AND HEALTH
MANAGEMENT**

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PART 1

SUMMER TRAINING WORK

(ASSIGNED BY FACULTY MENTOR)

**“THE IMPACT OF LOCKDOWN ON
PHYSICAL ACTIVITIES AND SEDENTARY
LIFE-STYLE IN SCHOOL GOING
CHILDREN DURING “COVID-19
OUTBREAK”.**



INTRODUCTION

Any and every individual follows a routine in his/her daily life, people go to work, children go to school and colleges, elderly have their post-retirement routine, etc.

For many of us, daily natural activity may have included walking to and from work, moving around the workplace to and from your desk and running around after the kid.

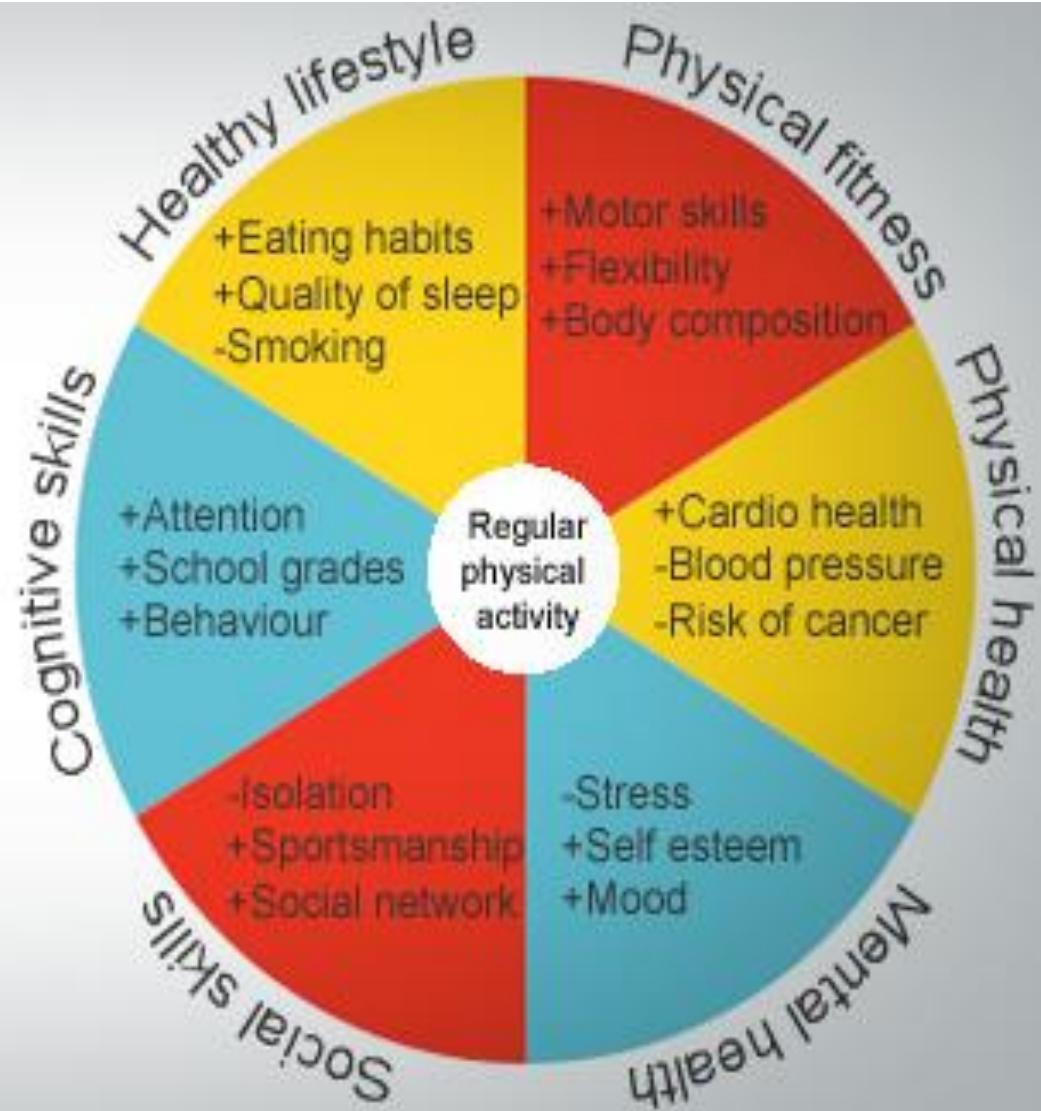
We don't realize but each one of us have a sequence of activities or habits regularly followed.

Now what happens when the same people are suddenly taken out of their routine and asked to just stay at home for an indefinite period?

Routine is disturbed, habits are disturbed and so is mind and body.



Benefits of Physical Activity?



Source: adapted from Kino-Québec Scientific Committee.
Physical Activity Sports and Youth - Knowing and Acting, 2011

Importance of Physical Activity During COVID-19



1

Enhances Immune Functions -> Reduces Inflammation -> Reduces severity of infection

2

Improves common chronic condition (cvd, diabetes)

3

Great stress management tool by reducing symptoms of anxiety and depression

4

Helps bring cortisol levels in balance

LITERATURE REVIEW

S.No.	TITLE	AUTHOR NAME	COUNTRY	YEAR	STUDY DESIGN	POPULATION	OBJECTIVE	METHODOLOGY	FINDINGS/OUTCOME
1	Impact of Coronavirus Imposed Lockdown on Indian Population and their Habits	Mahendra Kumar, Sachin Dwivedi	India	2020	Cross-sectional, Observational study	People in the 18-40 years of the age group who live in their homes due to COVID-19 lockdown.	To assess the impact of lockdown on individuals' daily habits such as sleep/got up, social media use, work from home and more selected variables.	Sampling technique: Probability systemic sampling technique. Sample Size: 749 Study tool: A self-prepared semi-structured anonymous questionnaire was used to record the responses of participants.	1) The results of responses about work from home 55% participants are working from home since lockdown condition implementation. 2) Routine habits 3) Since lockdown 40 % of participants agreed to use more internet data on official work and 31% of participants use internet data more than usual to access social media since lockdown. 4) Change in eating, sleeping etc habits.

2	The Impact of COVID-19 on Physical Activity Behavior and Well-Being of Canadians	Iris A. Lesser and Carl P. Nienhuis	Canada	2020	Cross-sectional, Observational study	Canadians	The objective of this study was to assess how these preemptive measures impacted physical activity behaviour and well-being of Canadians	Study tool: An online survey was utilized to measure participant physical activity behavior, nature exposure, well-being and anxiety levels. Sampling technique: snowball sampling. Sample size: 1098	1)While 40.5% of inactive individuals became less active, only 22.4% of active individuals became less active. Comparatively, 33% of inactive individuals became more active while 40.3% of active individuals became more active. 2)Inactive participants who spent more time engaged in outdoor physical activity had lower anxiety than those who spent less time in outdoor physical activity.
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3	Mitigate the effects of home confinement on children during the COVID-19 outbreak	Guanghai Wang Yunting Zhang Jin Zhao Jun Zhang Fan Jiang	China	2020	NA	Chinese children	To ensure the academic running of the children of china by the chinese government and to evaluate the effects of home quarantine with no school on these children.	Secondary study on China government's adaptation on home schooling plan. Evaluation of the steps taken by Chinese government to advance children's activity with relation to education and physical point.	The government should provide guidelines and principles in effective online learning and ensure that the contents of the courses meet the educational requirements. promotional videos can be useful to motivate children to have a healthy lifestyle at home by increasing physical activities, having a balanced diet, regular sleep pattern, and good personal hygiene. ⁸ To make these educational materials truly effective, they must be age-appropriate and attractive. They require professional expertise and real resources to create.
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4	Effect of the Pandemic and Lockdown on Mental Health of Children	Kalpna Thakur & Naveen Kumar & NovRattan Sharma	India	2020	NA	Children of India	To address the psycho-social problems, activities of children at home and problems faced by managing parents unavailability either due to covid infection or working for it in hospitals.	NA	Children staying at home due to lockdown spend more time in front of TV and internet which can lead to psycho-social problems (like lower self-esteem), internet addiction, cyberbullying which can affect their mental health. Spending more time inside the house makes children vulnerable to effects of indoor pollution which can affect their brain development leading to limited development of cognitive abilities. Children who are separated from their parents due to their infections or their parents being affected or their parents serving in hospitals are more vulnerable to depression, stress, anxiety, avoidance behavior, and PTSD has been reported.
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OBJECTIVES

To assess the impact on physical activities in school going children due to Covid-19 lockdown.



1

2



To assess the problem faced by school going children in their physical and mental well-being due to school closing during COVID-19 lockdown

RESEARCH METHODOLOGY

STUDY DESIGN

Integrative Literature Review.

METH. APPROACH

A total of 60 studies were studied, out of which 22 were considered, excluding the ones where there was either no connection between the effects of lockdown on children or the ones that only considered mental health of adults..

SEARCH METHODS

Search terms identifying physical health and childcare were trialed and the accompanying inquiry terms were created: truncations "**lockdown**" joined with "**physical OR psychological**" (truncated) and "**children**" (truncated), utilizing the Boolean administrator "**AND**".

Literature collection was done using Google scholars, Medline, Pub-med, Research gate online platforms..

DISCUSSION

- A questionnaire was filled by 1366 residents of Canada on their physical behavior during lockdown and the results showed that 40.5% of inactive individuals became less active while only 22.4% of active individuals became less active. Comparatively, 33% of inactive individuals became more active while 40.3% of active individuals became more active. Many inactive people took up indoor exercises, started walking, cycling etc. It's seen that many active individuals increased their physical activities as their way to de-stress and refresh the brain in their days of anxiety. Inactive individuals got plenty of free time to actually workout at home.
- On the other side, a quick, large cross-sectional Italian survey, participated by 2974 Italians demonstrated a statistically significant difference in physical activity of individuals before and during covid-19 lockdown. A major change in sleep cycle and quality of sleep has been noticed due to lack of physical activity.

- In China, more than 60% individuals were living in a sedentary lifestyle with mean screen-time of individuals increased up to 4 hours/day i.e. more use of internet and TV. As having ample of time during lockdown people were drawn to spend more time watching TV and sleeping.
- In another study On Sicilian population showed a significant positive co-relation between variation in physical activity and mental well-being, it also observed decrease in total weekly energy expenditure of adults.
- A UK study associated less intensive physical activity during lockdown with obesity, hypertension, depression, lung disease and disability.
- The UN Educational, Scientific and Cultural Organization estimates that 138 countries have closed schools nationwide, and several other countries have implemented regional or local closures. These school closures are affecting the education of 80% of children worldwide. Although scientific debate is ongoing with regard to the effectiveness of school closures on virus transmission.
- Home care of C&A is known to decrease the level of physical activity and increase in sedentary time, specially screen-time. Evidence suggests that when children are out of school (for example, weekends and summer holidays), they are physically less active, have much longer screen time, irregular sleep patterns, and less favorable diets, resulting in weight gain and a loss of cardiorespiratory fitness.

- Several observational and experimental studies show that increase in Sedentary behavior is associated with higher obesity and cardio-metabolic risks in C&A. And the event of lockdown indirectly promotes sedentary behavior which can lead to increase in time spent sitting or lying down which ultimately affects the mental and physical health of the children.
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- Parents who WFH rigorously for long hours might not be able to give children the time that they need to cope with adjusting situations. Toddlers and children below 5 years of age require constant attention which end up being a difficult task for WFH parents with no help. Loss of job, a death in family, domestic violence, child abuse, family disputes etc. are major occurring events during lockdown that the child of the family has to go through. Dysfunctional families already give children of the family a hard time, anything else is an add-on.
- A qualitative report on possible emotional behavior in view of lockdown on children of 4-10 years of age shows that 26.48% of children, who before the Covid-19 emergency had acquired the competence to sleep alone in their own bedroom, asked to sleep in their parent's room. 18.17% expressed fears they didn't have before. 53.53% showed irritability, anxiety and nervousness regarding restrictions and school closures.
- Indian studies state that staying inside the house for more time may make children vulnerable to the effects of indoor pollution as a result affecting brain development which can limit the development of cognitive abilities. The study also highlights the fact that children whose parents are serving in hospitals or are involved in the front run of fighting covid-19 are more vulnerable to anxiety, stress, depression and PTSD has been reported.

- For many C&A, school is not just a place for learning but is also a source of eating healthy nutritious food. Research shows that school lunch is associated with improvements in academic performance, whereas food insecurity (including irregular or unhealthy diets) is associated with low educational attainment and substantial risks to the physical health and mental wellbeing of children.
- Children in low income households have difficulty in home schooling as there is no availability of resources, even online learning is a huge luxury due to lack of internet and technology available to them.
- In Europe, a substantial number of children live in homes in which they have no suitable place to do homework (5%) or have no access to the internet (6·9%). Furthermore, 10·2% of children live in homes that cannot be heated adequately, 7·2% have no access to outdoor leisure facilities, and 5% do not have access to books at the appropriate reading level.
- To mitigate the effects of lockdown on children's psychological and physical health, Italian pediatric society recommended specific recreational and physical activities according to the age of the children and respecting social distancing. The government of Spain considering recommendations by experts suggested general measures and specific measure for C&A with disabilities, neurodevelopmental disorders or mental health problems to reduce the negative psychological impact.

RECOMMENDATION



1) Taking up on walking, cycling or any activity that follows social distancing.

2) Adapting habits like WALK & TALK while on call, intermittent fasting (specially for obese people).

3) Reduction of Screen Time to avoid sedentary behavior.

4) For parents/guardians:

- Close and Open Communication
- Respecting child's identity and needs
- Direct Conversation
- Indulging in family activities
- Monitoring child's activities

5) For school/governments:

- E-learning including physical activity assignment
- Post-lockdown counselling

CONCLUSION

The COVID-19 pandemic has swept the world, there is a lot we don't know about the virus and its effects.

So, in order to fight it, keeping up the physical activities is one of the measures that should be taken for betterment of our own immune system and mental health.

The possible effects of this lockdown may have proved beneficial for some but have mainly deteriorated an individual's way of life.

Keeping up with this virus is getting difficult day by day for human population. Every nation, big or small is trying it's best to fight it however humans can only do so much.

Considering the co-relation between mental and physical health so to do our part as citizens, eat healthy, stay fit, sleep well, keep your children loved and help people to your limit (by obviously keeping "social distancing" at place).

REFERENCES

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https://ijshr.com/IJSHR_Vol.5_Issue.2_April2020/IJSHR0013.pdf
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https://www.researchgate.net/publication/342019254_Eating_habits_and_lifestyle_changes_during_COVID-19_lockdown_an_Italian_survey
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https://ijshr.com/IJSHR_Vol.5_Issue.2_April2020/IJSHR005.pdf

PART 2

ONLINE COURSE REPORT

“INTRODUCTION TO R”



COURSE DESCRIPTION

“SWAYAM” by GOI

AICTE(All India Council for Technical Education)
approved FDP course

Elective type of course for
UG/PG/Teachers/ Trainers

Duration of 12 Weeks

R is a language and environment for statistical computing & graphics, it is the most preferred open-source language for analytics and data science.

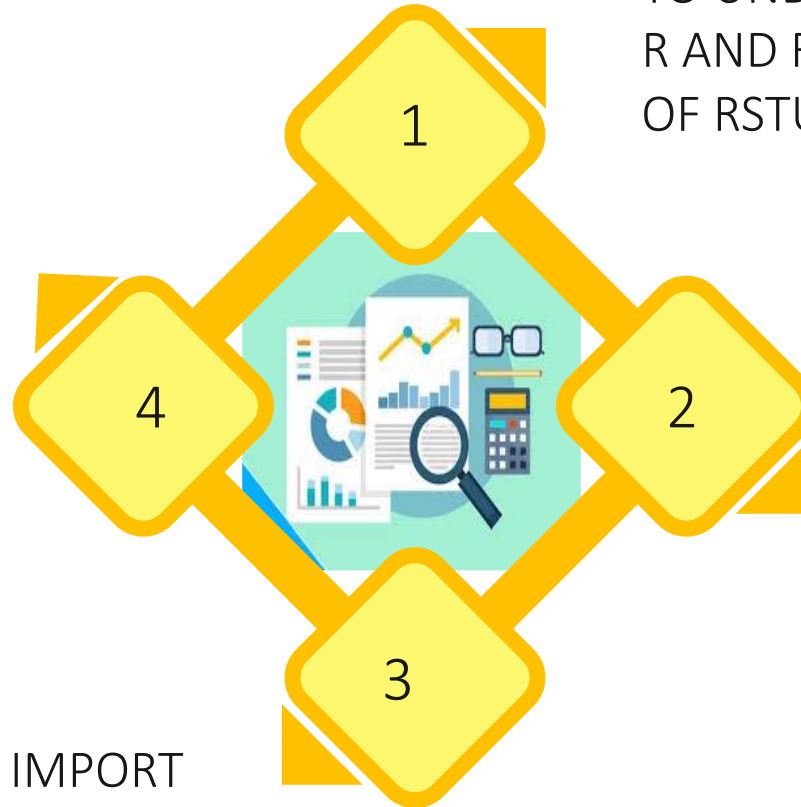
R can be used for simple calculations, matrix calculations, differential equations, optimization, statistical analysis, plotting graphs, etc.

Here are some of benefits of using R:

- R is free to use and is a open source.
- R has a huge library of user-contributed packages.
- R runs on windows, OSX, Linux
- R facilitates reproducible research.
- R is widely used in industry and is one of highly sought after skills by analytics and data science companies.

OBJECTIVE OF THE COURSE

TO UNDERSTAND MAJOR
DATA STRUCTURES



TO UNDERSTAND HOW TO INSTALL
R AND RSTUDIO AND INTERFACE
OF RSTUDIO.

TO LEARN HOW TO READ
FILES, MANIPULATE DATA
USING DIFFERENT
FUNCTION IN R

TO LEARN HOW TO IMPORT
AND EXPLORE DATA

COURSE CONTENTS

1. Installing R and RStudio on windows	12. Lists and its operations
2. Introduction to Basics of R	13. Plotting Histograms and Pie charts
3. Introduction to Data Frames in R	14. Plotting Bar charts and Scatter plot
4. Introduction to RStudio	15. Introduction to ggplots2
5. Introduction to R Script	16. Aesthetic Mapping in ggplots2
6. Working directories in RStudio	17. Data Manipulation using dplyr package
7. Indexing and Slicing Data Frames	18. More functions in dplyr package
8. Creating Matrices and Data Frames	19. Pipe Operator
9. Operations on Matrices and Data Frames	20. Conditional Statement
10. Merging and Importing data	21. Functions in R
11. Data types and Factors	

METHODOLOGY

This course comprises 22 audio-video spoken tutorials along with 2 spoken-tutorial sheets and 2 watch before you begin videos.



1

Install R and RStudio

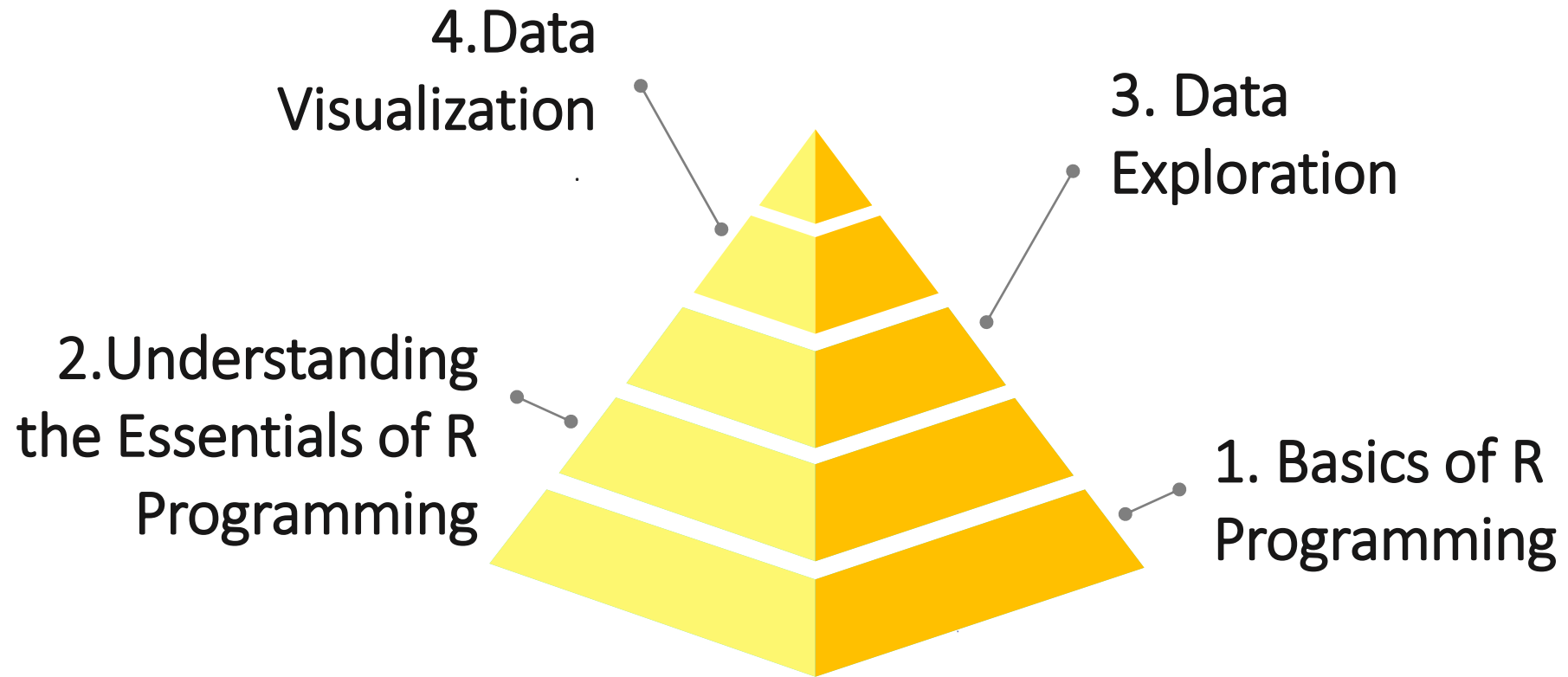
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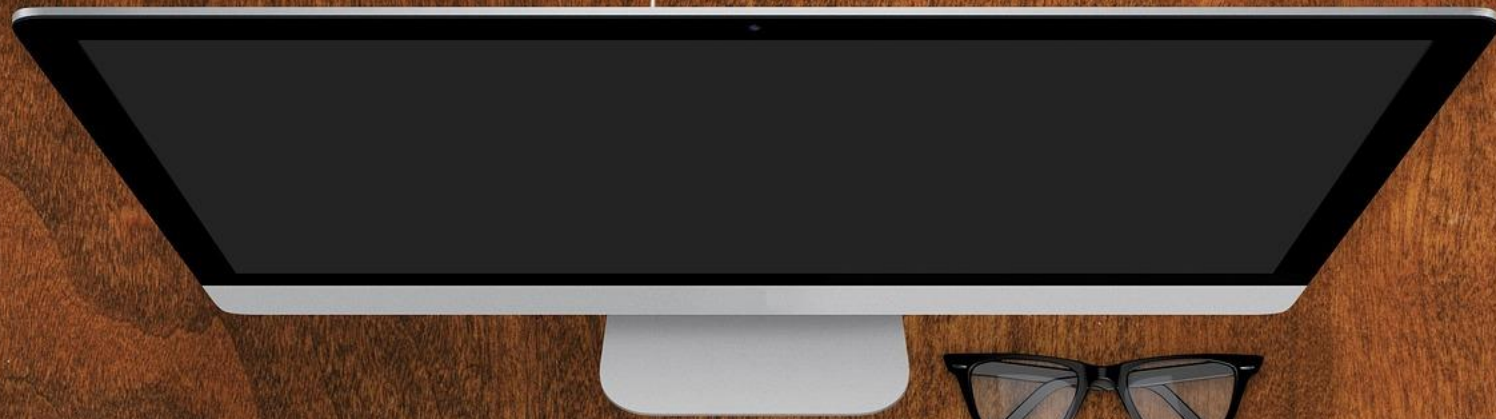
How to learn from spoken tutorials

3

Follow the step by step learning and complete the assignment after each tutorial

KEY LEARNING





THANK YOU

