Q1. A) Write and execute the following Commands on Linux

i) Create a directory named FYBCA under that create a 1 directory OS. Create fileunder subdirectories OS.

```
mkdir -p FYBCA/OS
touch FYBCA/OS/file.txt
```

ii) Write linux command to Open Last Edited File.

```
ls -t | head -n 1 | xargs xdg-open
```

iii) Create the following text file class.txt and write commands based on it.

Fybca science Sybca science Tybca science Fybca science

Remove duplicate entries from above file.

```
sort -u class.txt -o class.txt
```

iv) Create file as follows and write commands for same.

Student Fruits

Write a linux command to merge a file by pasting the data into 2 columns using a colon separator

```
echo -e "Student\nFruits" > file.txt
paste -d ":" file.txt file.txt
```

v) Create a file by Inputdevices.txt with least 5 lines long using vi editor's input commands and try the following using Vi commands.

Search the keyword "dev" from a file.

```
vi Inputdevices.txt
/\<dev\>
```

Q1.B) Write a shell script to find area of circle by accepting input radius.

```
echo "Please enter the radius of the circle:"
read radius

area=$(echo "3.14159 * $radius * $radius" | bc)

echo "The area of the circle with radius $radius is: $area"
```

Q2. Write a shell script that computes the gross salary of a employee according to the following rules:

i) If basic salary is < 1500 then HRA =10% of the basic and DA =90% of the basic.

ii) If basic salary is >=1500 then HRA =Rs500 and DA=98% of the basic

```
echo "enter the basic salary:"
read bsal
if [ $bsal -lt 1500 ]
then
gsal=$((bsal+((bsal/100)*10)+(bsal/100)*90))
echo "The gross salary : $gsal"
fi
if [ $bsal -ge 1500 ]
then
gsal=$(((bsal+500)+(bsal/100)*98))
echo "the gross salary : $gsal"
fi
```

Or

Q2. Write a shell script that will report the number of lines in each file within the current directory.

```
#!/bin/bash

for file in *; do
   if [ -f "$file" ]; then
      lines=$(wc -l < "$file")
      echo "$file: $lines lines"
   fi
done
```