

# **Exploratory Statistical Data Analysis With R Software (ESDAR)**

**Swayam Prabha**

## **Lecture 1**

### **What is R and How to Learn the Course**

**Shalabh**

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**Indian Institute of Technology Kanpur**

Slides can be downloaded from  
<http://home.iitk.ac.in/~shalab/sp>



# How to Learn and Follow the Course: Basics

Blue Colour Courier New Font means a Command or Syntax in R.

Black colour Calibri font means usual expression.

Example:

Statement: The assignment operators are the left arrow with dash `<-` and equal sign `=`

`x <- 20` assigns the value 20 to `x`

`x = 20` assigns the value 20 to `x`

# How to Learn and Follow the Course: Basics

Outcome over R console:

```
> x = 20
```

```
> x
```

```
[1] 20
```

# How to Learn and Follow the Course:

## Basics

Syntax:

`y = x * 2` assigns the value `2*x` to `y`.

`z = x + y` assigns the value `x + y` to `z`.

Outcome over R console:

```
> y = x * 2
```

```
> y
```

```
[1] 40
```

```
> z = x + y
```

```
> z
```

```
[1] 60
```

# How to Learn and Follow the Course:

## Basics

Screenshot of outcome over R console

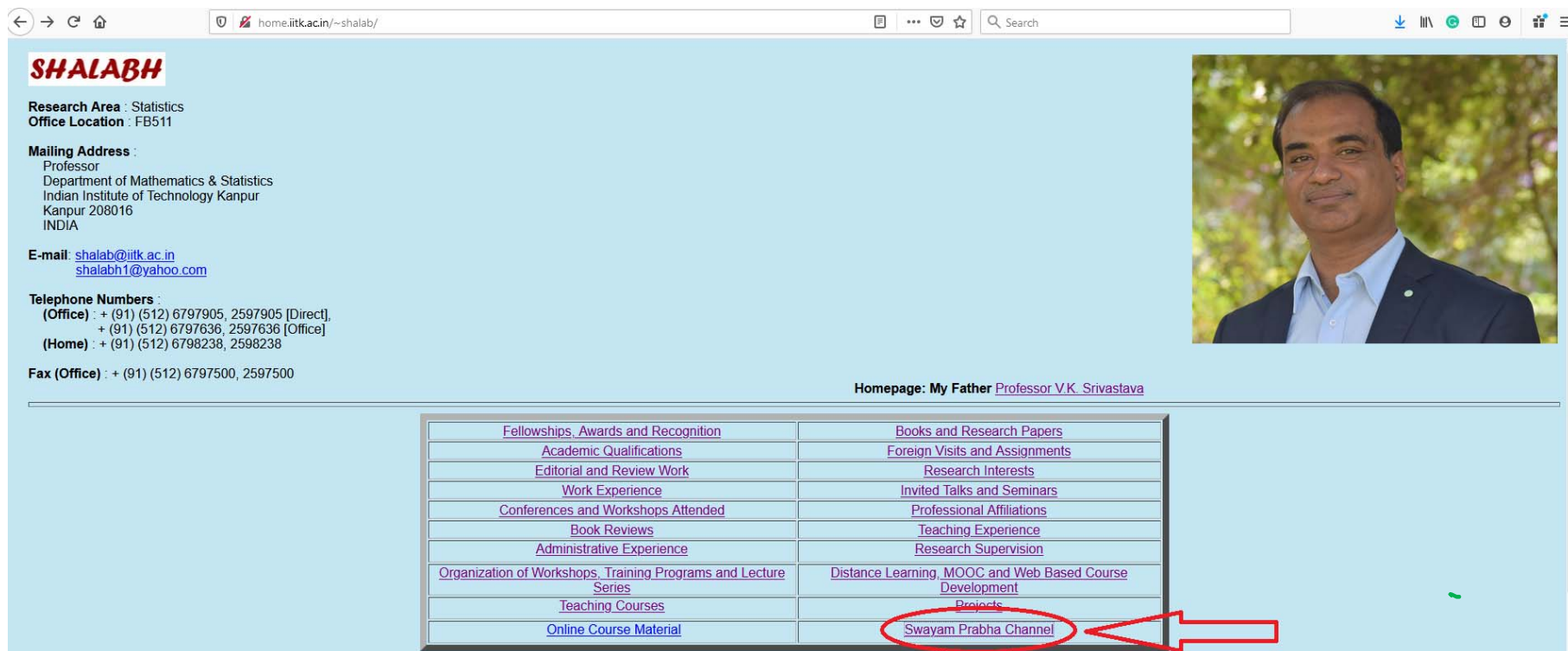
R Console

```
> x=20
> x
[1] 20
>
> y = x * 2
> y
[1] 40
> z = x + y
> z
[1] 60
```

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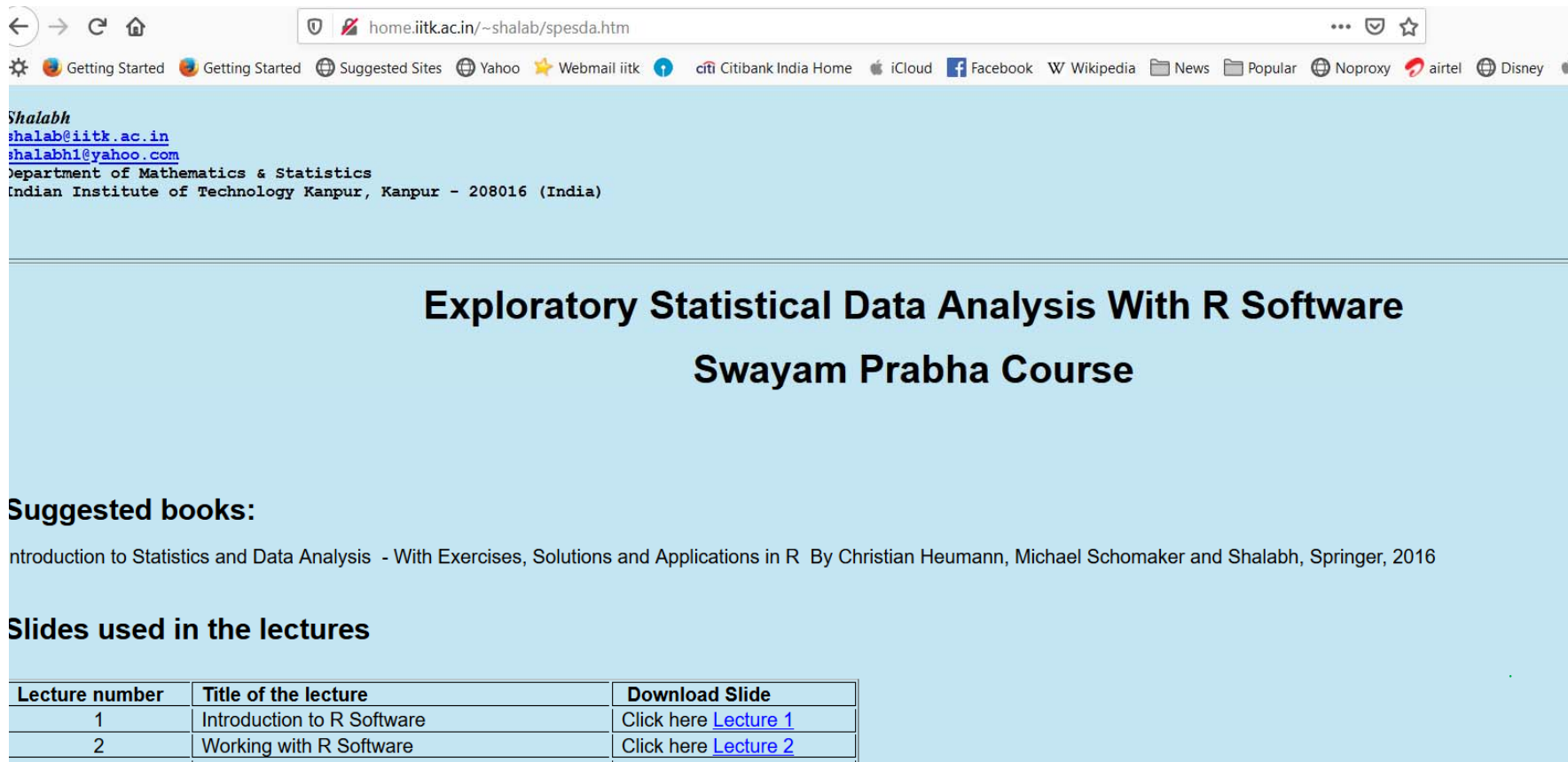
The screenshot shows a web browser window with the URL [home.iitk.ac.in/~shalab/](http://home.iitk.ac.in/~shalab/). The page features a header with the name "SHALABH" in a red box. Below this, contact information is provided, including the research area (Statistics), office location (FB511), mailing address (Department of Mathematics & Statistics, Indian Institute of Technology Kanpur), and email addresses ([shalab@iitk.ac.in](mailto:shalab@iitk.ac.in) and [shalabh1@yahoo.com](mailto:shalabh1@yahoo.com)). Telephone and fax numbers are also listed. A portrait of Professor V.K. Srivastava is shown on the right. Below the contact information, there is a link to the homepage of his father, Professor V.K. Srivastava. At the bottom, a navigation menu is displayed in a table format, with the link "Swayam Prabha Channel" circled in red and an arrow pointing to it.

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After clicking at [Swayam Prabha Channel](#), come to following:



The screenshot shows a web browser window with the address bar displaying `home.iitk.ac.in/~shalab/spesda.htm`. The browser's toolbar includes various icons for navigation and search. The page content is as follows:

**Shalabh**  
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## Exploratory Statistical Data Analysis With R Software

### Swayam Prabha Course

**Suggested books:**

Introduction to Statistics and Data Analysis - With Exercises, Solutions and Applications in R By Christian Heumann, Michael Schomaker and Shalabh, Springer, 2016

**Slides used in the lectures**

Lecture number	Title of the lecture	Download Slide
1	Introduction to R Software	Click here <a href="#">Lecture 1</a>
2	Working with R Software	Click here <a href="#">Lecture 2</a>

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