Information Technology

NVEQ Level 1 – Class IX

IT103-NQ2012-Mastering Typing

Student's Handbook

Student Name:_____

Student Roll Number:_____

Batch Start Date:_____

Acknowledgements

The following partners were instrumental in providing the content:

Table of Contents

Preface

The National Curriculum Framework, 2005, recommends that children's life at school must be linked to their life outside the school. This principle makes a departure from the legacy of bookish learning which continues to shape our system and causes a gap between the school, home, community and the workplace.

The student workbook on **"Mastering Typing"** is a part of the qualification package developed for the implementation of National Vocational Education Qualification Framework (NVEQF), an initiative of Ministry of Human Resource Development (MHRD), Government of India to set common principles and guidelines for a nationally recognized qualification system covering Schools, Vocational Education and Training Institutions, Technical Education Institutions, Colleges and Universities. It is envisaged that the NVEQF will promote transparency of qualifications, cross-sectoral learning, student-centred learning and facilitate learner's mobility between different qualifications, thus encouraging lifelong learning.

This student workbook, which forms a part of vocational qualification package for student's who have passed Class VIII or equivalent examination, was created by a group of experts. The IT-ITeS Skill Development Council approved by the National Skill Development Corporation (NSDC) for the IT/ITeS Industry developed the National Occupation Standards (NOS). The National Occupation Standards are a set of competency standards and guidelines endorsed by the representatives of IT Industry for recognizing and assessing skills and knowledge needed to perform effectively in the workplace.

The Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), a constituent of National Council of Educational Research and Training (NCERT) in association with Wadhwani Foundation has developed modular curricula and learning materials (Units) for the vocational qualification package in IT/ITes sector for NVEQ levels 1 to 4; level 1 is equivalent to Class IX. Based on NOS, occupation related core competencies (knowledge, skills, and abilities) were identified for development of curricula and learning modules (Units).

This student workbook attempts to discourage rote learning and to bring about necessary flexibility in offering of courses, necessary for breaking the sharp boundaries between different subject areas. The workbook attempts to enhance these endeavour by giving higher priority and space to opportunities for contemplation and wondering, discussion in small groups and activities requiring hands-on-experience. We hope these measures will take us

significantly further in the direction of a child-centred system of education outlined in the National Policy of Education (1986). The success of this effort depends on the steps that school Principals and Teachers will take to encourage children to reflect their own learning and to pursue imaginative and on-the-job activities and questions. Participation of learners in skill development exercises and inculcation of values and creativity is possible if we involve children as participants in learning, and not as receiver of information. These aims imply considerable change in school routines and mode of functioning. Flexibility in the daily time-table would be a necessity to maintain the rigour in implementing the activities and the required number of teaching days will have to be increased for teaching and training.

About Your Workbook

This workbook is to assist you with completing the Unit of Competency **IT103-NQ2012: Mastering Typing.** You should work through the workbook in the classroom, at the workplace or in your own time under the guidance and supervision of your teacher or trainer.

This workbook contains sessions which will help you to acquire relevant knowledge and skills (soft and hard) on various aspects of the unit of competency. Each session is small enough to be easily tackled and digested by you before you move on to the next session. Animated pictures and photographs have been included to bring about visual appeal and to make the text lively and interactive for you. You can also try to create your own illustrations using your imagination or taking the help of your teacher. Let us now see what the sections in the sessions have for you.

Section1: Introduction

This section introduces you to the topic of the Unit. It also tells you what you will learn through the various sessions covered in the Unit.

Section 2: Relevant Knowledge

This section provides you with the relevant information on the topic (s) covered in the session. The knowledge developed through this section will enable you to perform certain activities. You should read through the information to develop an understanding on the various aspects of the topic before you complete the exercise (s).

Section 3: Exercise

Each session has exercises, which you should complete on time. You will perform the activities in the classroom, at home or at the workplace. The activities included in this section will help you to develop necessary knowledge, skills and attitude that you need for becoming competent in performing the tasks at workplace. The activities should be done under the supervision of your teacher or trainer who will guide you in completing the tasks and also provide feedback to you for improving your performance. To achieve this, prepare a timetable in consultation with your teacher or trainer and strictly adhere to the stipulated norms or standards. Do not hesitate to ask your teacher or trainer to explain anything that you do not understand.

Section 4: Assessment

The review questions included in this section will help you to check your progress. You must be able to answer all the questions before you proceed to the next session.
At the end of the Unit, there is a list of learning resources which include books, journals, newsletters, websites, etc. to support your further learning.

SESSION 1: GETTING STARTED WITH TOUCH TYPING

Touch typing is a method of typing without using the sense of sight to find the keys. Specifically, a touch typist will know their location on the keyboard through muscle memory. Touch typing typically involves placing the eight fingers in a horizontal row along the middle of the keyboard (the *home row*) and having them reach for other keys. Touch typing can be done using two hands or possibly only with one.

A touch typist starts by placing his or her fingers on the "start position" in the middle row and knows which finger to move and how much to move it for reaching any required key. Learning typically includes first printing exercises containing only letters on or near the standard position and then gradually mastering other rows. It is important to learn placing fingers into the start position blindly as the hands are frequently raised from the keyboard to operate the line feed lever (in the past) or (more recently) the computer mouse. The keys F and J frequently contain some surface features that allow the typist to recognize them by touch alone, thus removing the need to look down at the keys to reset yourself at the home row.

Typing speed generally improves with practice. The typing speed can be increased gradually and speeds of 60 WPM or higher can be achieved. The rate of speed increase varies between individuals. Many websites and software products (**e.g. Rapid Typing Tutor**) are available to learn touch typing and many of these are free.

RELEVANT KNOWLEDGE

Rapid Typing Tutor - Introduction to the Software

Rapid Typing Tutor is designed to teach adults and kids to use their computer keyboard more efficiently than ever. Learning to type is fun with the typing game included with Rapid Typing Tutor, while its extensive training statistics and customized lessons are rarely seen in the much more expensive products.

Getting Started with Rapid Typing

Typing Tutor is an easy-to-use keyboard trainer, so you'll hardly have any troubles with its usage and configuration. Follow the links below to get started:

1. First, get familiar with **Typing Tutor**'s user experience.
2. Then, start your lessons and learn how to interpret your results and statistics.

If you feel that the preset lessons and courses are not enough, you may also want to create your own with Lesson Editor. It's a quick and easy way to customize your learning process.

Touch Typing Technique

Touch typing improves typing speed and accuracy. A touch typist never looks at the keyboard. The fingers hit the right keys by force of habit. The typist is entirely focused on the text being typed, reading the words and phrases as the fingers type the text reflexively. Touch typing can be learned by performing special exercises.

Stage one of the process begins with learning the home row of the keyboard (the row beginning with the Caps Lock key). Looking at the keyboard is strictly forbidden. This is followed by learning the lower and upper rows, the numbers row, upper-case letters and special symbols.

Stage two involves memorizing frequently used syllables and typing words containing these syllables.

Stage three involves typing actual text to perfect the skills acquired.

Touch Typing Rules

- The F, D, S, A, and J, K, L, ; keys (on a QWERTY keyboard) represent the base position. Keyboards usually have small protrusions on the F and J keys. They help your fingers locate the base position without looking at the keyboard. Try to return your fingers to the base position after each keystroke.
- Colour coding shows which finger should press each key. (see the picture above) The left index finger is reserved for all the red keys. The right index finger is reserved for green keys, and so forth. Use the thumb of whichever hand is more convenient for you to press the Space key.
- The base position on the numeric pad is the number 5 key for the middle finger, 4 for the index finger, and 6 for the ring finger. The numeric pad simplifies and speeds up numerical data input.

- Upper-case letters and symbols appearing on keys in the numbers row are typed by one hand with the little finger of the other hand holding down the SHIFT key.
- Do not look at the keyboard. Try to locate the right key with your fingers.

Correct position of the hands and body

- While at the computer, sit straight (see the picture above) Always remember to keep your back straight.
- Keep your elbows bent at the right angle.
- Face the screen with your head slightly tilted forward.
- There should be at least 50-80 cm of distance between your eyes and the screen. In other words, your outstretched arm should barely touch the screen.
- The optimum height of the tabletop or under-desk keyboard drawer is 68 to 73 cm from the floor.
- The chair and table height should be chosen so as to expose the shoulder, arm, and wrist muscles to the least possible strain. The wrists can touch the tabletop in front of the keyboard. Never shift even a portion of your body weight to the wrists by resting on them.

Advice for successful touch typing practice

- Do not rush at the early stages of learning. High speed makes sense only when the fingers can hit the right keys by force of habit. Take your time when typing to avoid mistakes. The speed will pick up as you progress.
- You should establish and maintain a rhythm while typing. This means that keystrokes should come at equal intervals.
- Hit keys only with the fingers for which they have been reserved.
- Limit your hand and finger movement only to what is necessary to press a specific key. Keep your hands and fingers close to the base position. This improves typing speed and reduces stress on the hands.

- **Don't look at the keys when you type. Just slide your fingers around until they find the home row marking.**
- **Don't hammer on the keys. Try using the minimum force possible.**
- **To switch between upper/lower case always use the opposite hand.**

Be patient and practice as often as possible. Despite the simple touch typing rules, it takes some time to gain high speed. By following the rules, you will see your speed and accuracy improve over time.

EXERCISE

1. Sit high enough so that your elbow are approximately 90 degree angle as you type
2. Place the fingers on the keys correctly i.e., you fingers should be on the home row keys – A,S,D, and F with the left hand and J, K, and L with the right hand
3. Avoid looking at the key board while typing
4. Use your thumbs for pressing the space bar after each pattern/word or sentence.
5. To repeat a line click at the end of your typed line and then hold the back space key till it deletes what you have typed. Now retype the line

Practice the following:

Practice Items
Fjdk sla ghty
Vmbn ruei woqp
C,x. z/\'\ '-=[]
Shift Keys – FJDK SLA: GHTY
Shift Keys VMBN RUEI WOQP
Shift Keys – C<X> Z/|"| ~~+{}
Numeric Pad – 4560 789 123 + - &* / .
Digits, Symbols – 56473 28190 %^$&# @*!()

SESSION 2: USER EXPERIENCE

RELEVANT KNOWLEDGE

Once you've configured settings in Wizard, RapidTyping's main window will appear as shown below.

The window is composed of the following controls:

- **Taskbar** lets you set or change *on the fly* some basic options to start a lesson (keyboard layout, level, lesson, and background).
- **Three *horizontal* buttons** in the *top-right* corner (Options, About and Help) can display the corresponding dialogs.
- **Three *vertical* buttons** in the *top-left* corner (Lesson, Statistics and Lesson Editor) are used for switching between current lesson, User Statistics and Lesson Editor.
- **Text Panel** is the area where the text to be typed is displayed. You can easily edit it in Lesson Editor, if necessary.
- **Lesson Control Panel** includes several controls to pause/resume the current lesson, enable/disable sounds, and adjust the sound volume.
- And **Keyboard** is the virtual keyboard that will help you to learn touch typing with all ten fingers. You can customize its appearance in the ' Lesson' section.

When you're familiar with the **Typing Tutor** interface, go through how to start your first lesson. Remember to check our shortcuts 🖉 also. They'll make your interaction with **Typing Tutor** even more quick.

SESSION 3: BEGIN LESSONS

RELEVANT KNOWLEDGE

To start your first lesson in **Typing Tutor**, you have to select the keyboard layout, level and lesson category on the Taskbar shown below.
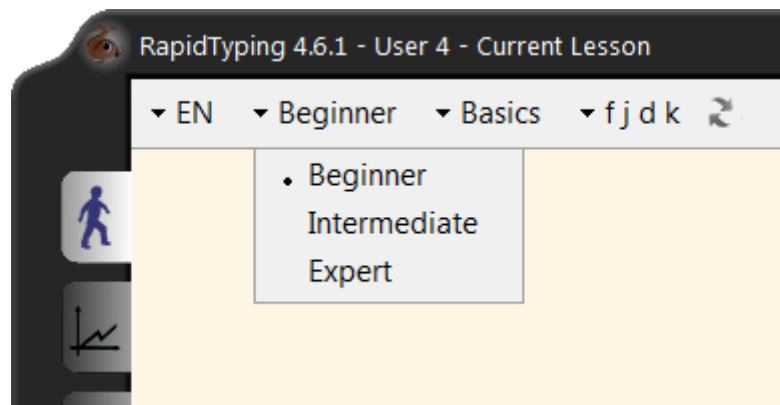
There are four drop-down lists in the top-left corner of the screen. Therefore, moving from left to right, the procedure will be as follows:

- Choose the layout (i.e. the language of your keyboard); it's "EN" on the picture above.
- Then, select a level (there are three levels available — **Beginner**, **Intermediate** and **Expert**); it's "Beginner" on the picture above.
- Specify lesson category (depending on the level chosen, the available categories may vary); it's "Basics" on the picture above.
- And finally, choose the lesson you'd like to study.
- When everything is ready, press any key, then put your fingers in the initial position shown on the keyboard and start typing the text.

There's also the Lesson Control Panel just above the Keyboard from where you can suspend/resume the current lesson or adjust the sound effects:

- To start/resume a lesson, click the ▶ button just above the top-left corner of the keyboard.

- To pause a lesson, click the ⏸ button that is displayed instead of the ▶ button.

- To restart the current lesson, click the ↻ button, which is the far right button on the Taskbar.

- To enable/disable sounds in the current lesson, click the 🔊 button located above the top-right corner of the keyboard and set the sounds volume using the vertical slider.

ⓘNotes:

- You can also set the background image for the Text Panel by choosing an option (**Animation**, **Wallpaper** or **Plain**) from the drop-down list on the Taskbar in top-right corner of the window.
- While making your way through the lessons, you'll probably mention two progress bars (one in green and another in yellow) on the Lesson Control Panel.

  The green progress bar (upper) shows you the percentage of completion for the current lesson, and the yellow progress bar (lower) reflects the acceptable time period for typing a single character.

When the yellow progress bar runs out at least once, **Typing Tutor** records that you've broken the rhythm at this character (see How to View and Analyze Your Statistics for details).

Upon the completion of each lesson, the Results window appears. Learn how to estimate your typing progress.

How to Interpret Your Results

Each time you complete a lesson, the Results dialog window displays your achievements in this lesson.

The Results dialog window consists of two tabs called Rating and Errors. The first one looks like this:

Here, you can review your metrics: overall skill level between *Beginner* and *Champion* (upper slider indicator) as well as words per minute, characters per minute and accuracy in percent (three remaining sliders below).

In the text area, you can check your mistakes that occurred during the lesson. The color indication is as follows:

- Green letters denote right inputs.
- Yellow letters stand for right inputs exceeding the acceptable timeframe.

- Red letters denote wrong inputs within the acceptable timeframe.
- Orange letters indicate wrong inputs that also exceed the acceptable timeframe (it's the worst result).

Error window

On the Error tab you can view your detailed statistics for the current lesson:
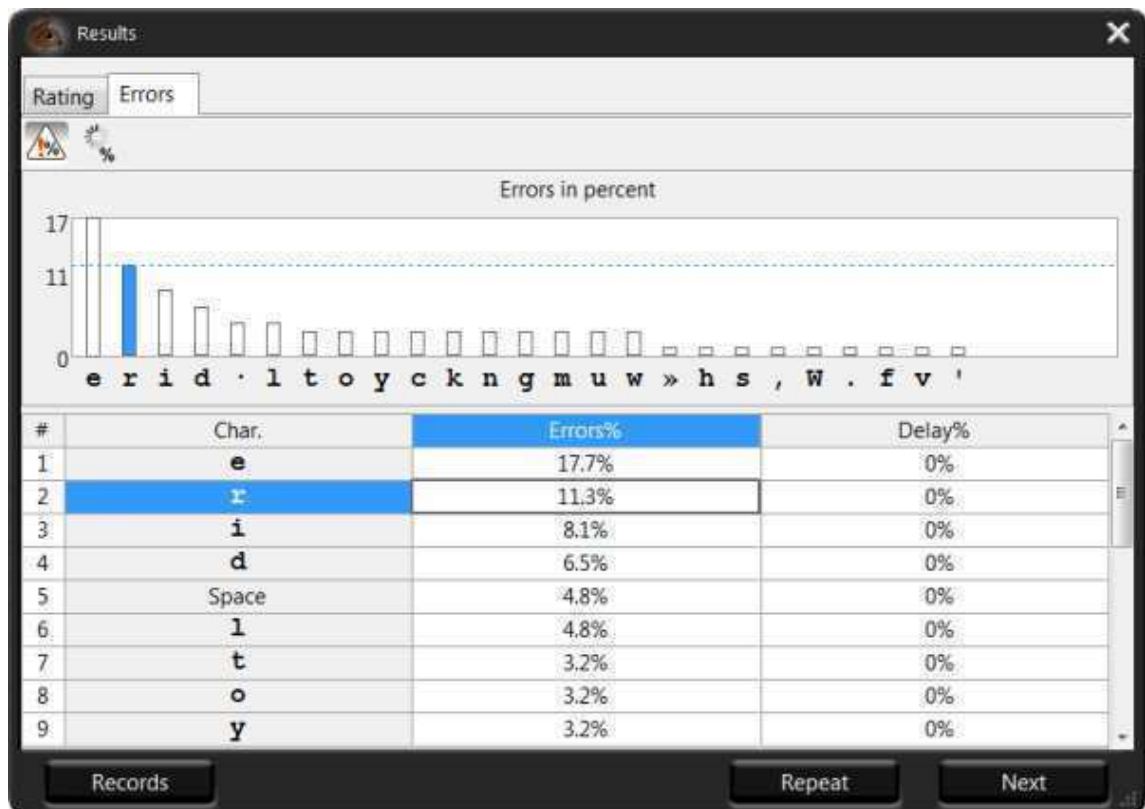
This tab shows your errors and delays percentage both in the graphical and table view. This will help you to better understand which letters are still hard for you to type. You can switch between the Errors in percent chart (by clicking the ![icon] button just below the tabs) and Delay in percent chart (by clicking the ![icon] % button).

On the bar chart, the X-axis corresponds to the letters used in the lesson, while the Y-axis shows you the errors/delays related to each letter. If there aren't any errors and delays for a certain character, it won't show up on the chart. The table below represents the same data with the exact numbers.

ⓘNote: When you select a *row* in the table, the corresponding bar on the chart will be highlighted. When you select a *column* in the table, the chart will show either errors or delays.

Then, you can click the Next button below to proceed to the next lesson, Repeat to go through this lesson once again, or Records to check whether your results are great enough for **Typing Tutor**'s Hall of Fame.

RELEVANT KNOWLEDGE

To view the results of all the lessons that you've already completed (not only the current one), go to the Statistics section.

How to view and analyze your statistics

To open the Statistics section, choose the button in the top-left corner of the main window. The Statistics screen will open as shown below.
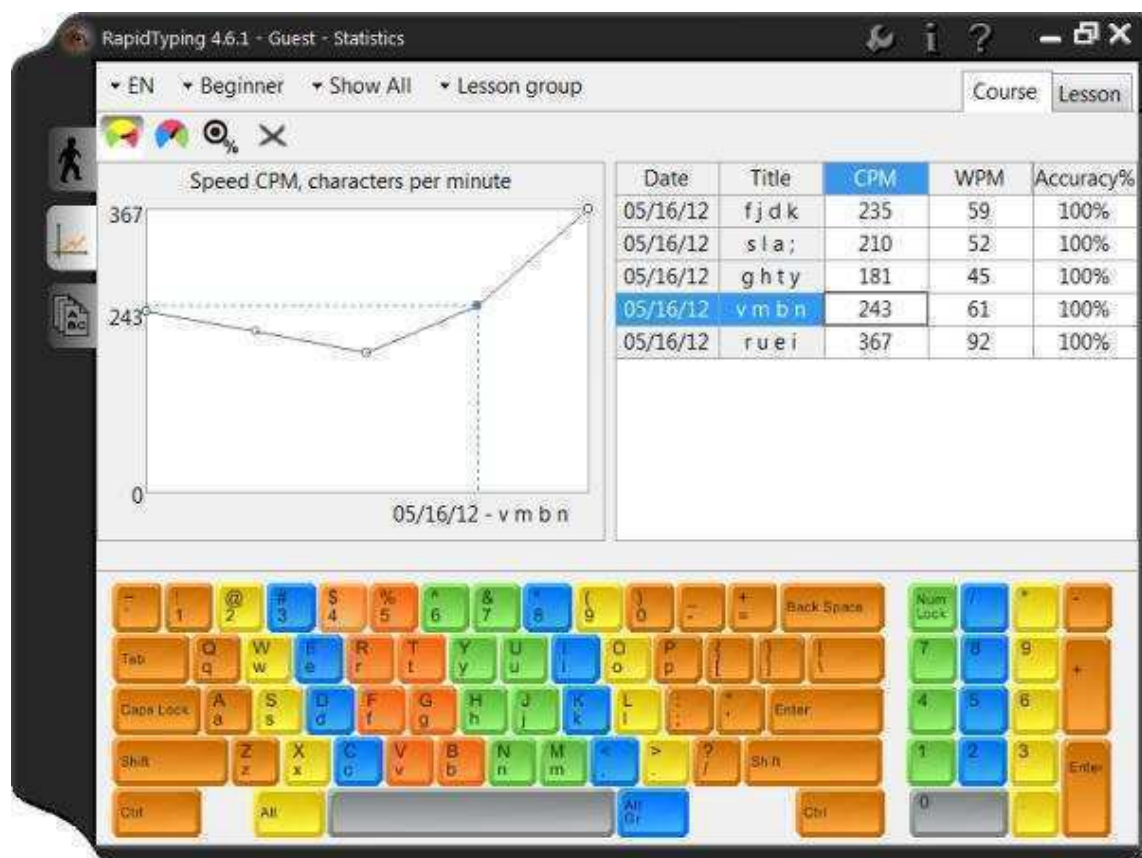
Here, you can review your overall statistics and progress both in graphical and table view. The following options are available:

17

- Click the ![icon] button in the top-left corner of the window (or press Ctrl+1 on your keyboard) to see your CPM speed (characters per minute) progress.

- Click the ![icon] button (or press Ctrl+2 on your keyboard) to see your WPM speed (words per minute) progress.

- Click the ![icon] button (or press Ctrl+3 on your keyboard) to see how your typing accuracy changes in the different lessons.

- To remove a metric from your statistics, select a lesson in the right table and click the ![icon] button (or press Delete on your keyboard).

On the Taskbar in the upper part of the window, you can choose *keyboard layout*, *level* and *course* for which you'd like to see statistics.

You can also switch between the *Lesson Group* (that is, statistics by lessons) and *Day Group* (statistics by days) options in the far right drop-down on the Taskbar.

Detailed Lesson Statistics

To review the statistics for a particular lesson, choose this lesson in the right table and click the Lesson tab in the top-right corner. The Lesson tab contains the same data that are displayed upon completion of every lesson. For details, see How to Interpret Your Results section.
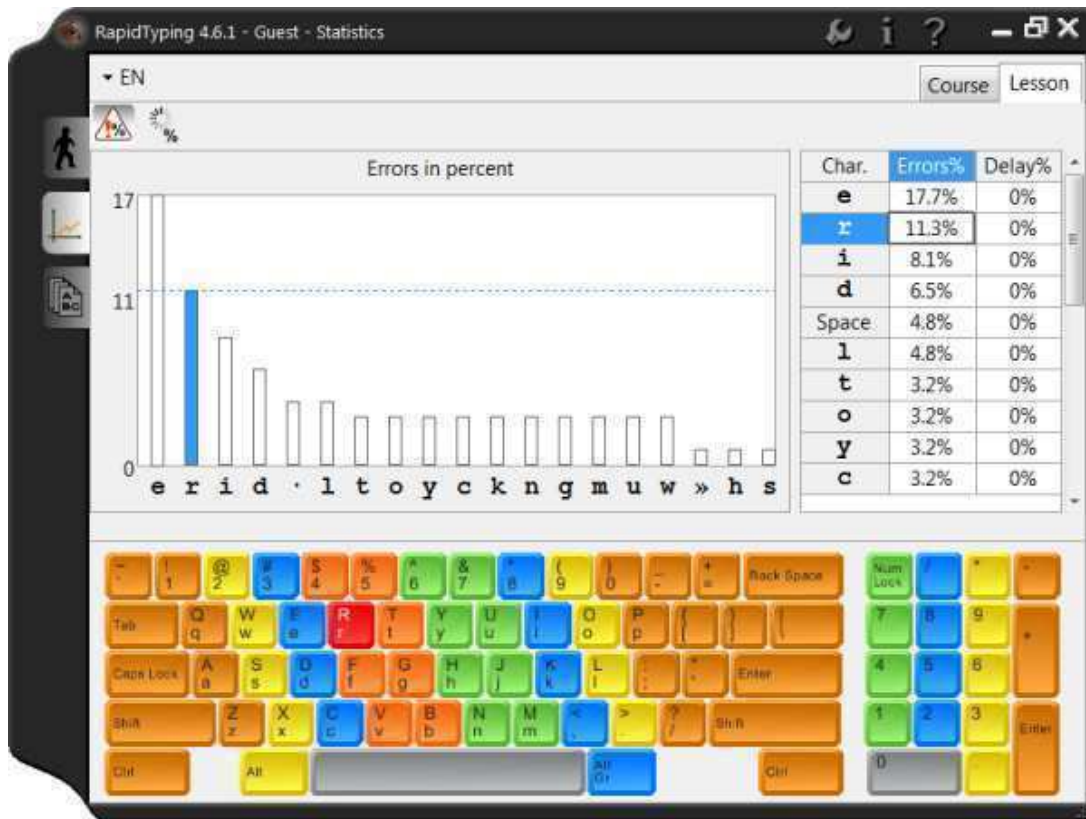
SESSION 5: WORKING WITH LESSON EDITOR

RELEVANT KNOWLEDGE

To open Lesson Editor, click the [icon] button in the top-left corner of the Rapid Typing window. The screen will appear as shown in the picture below.
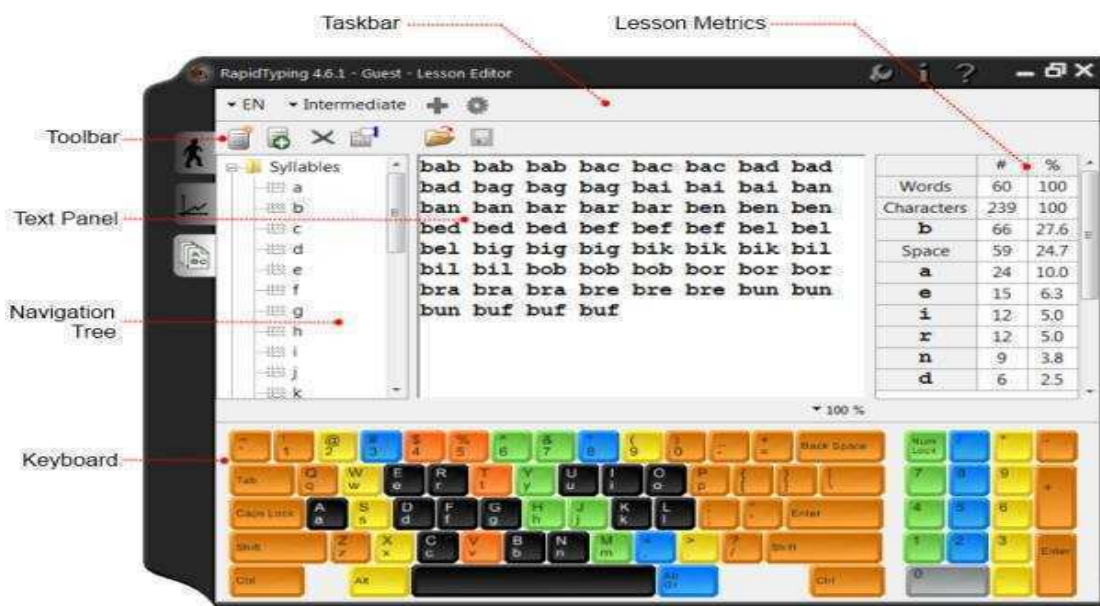
Lesson Editor window is composed of the following controls:

- Taskbar lets you select the keyboard layout and level of the lesson you'd like to edit.
- Toolbar includes buttons for adding a new lesson, inserting text from file and saving changes.
- Navigation Tree shows the existing courses and lesson hierarchy.
- Text Panel is the area where you can edit the text of the lesson currently selected in the Navigation Tree.
- Lesson Metrics displays the number and percentage of words, characters, spaces and specific characters in the lesson.
- And Keyboard is the virtual keyboard that highlights the characters used in the currently selected lesson. You can customize its appearance in the ' Lesson' section.

Lesson Editor makes all the lessons fully customizable. You can add, insert, change, and delete lessons, group them in courses, and review the corresponding metrics.

New Lesson

To add a new lesson, perform the following:

- Choose the keyboard layout and level from the drop-down list on the Taskbar.
- In the Navigation Tree, choose the course where you want to add the lesson.
- Click the ⬜ button on the Toolbar (or press Ctrl+N on your keyboard). The following dialog box will appear:
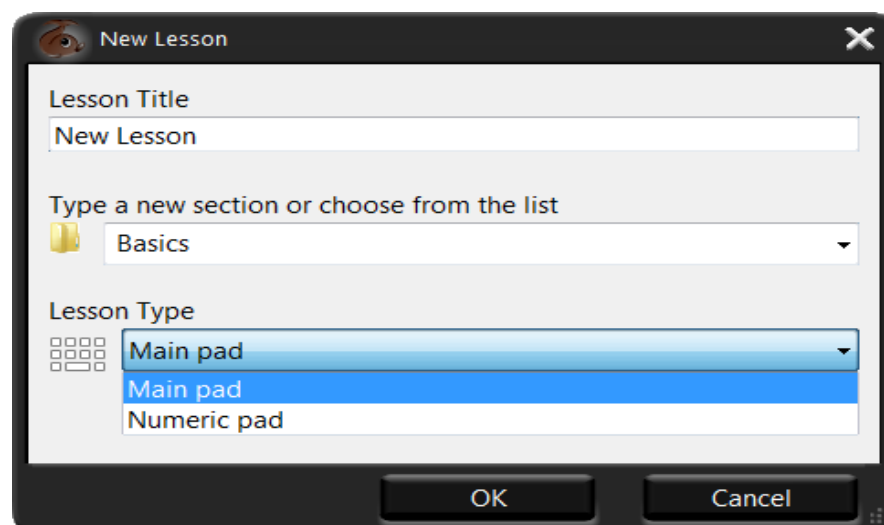
- Fill out the fields in this dialog: specify the name of the lesson in Lesson Title, verify the course where the lesson should be added, select Lesson Type from the drop-down list and click OK. A new lesson will be added to the selected course and will show up in the Navigation Tree.

Then, you can either type or copy and paste the lesson text manually, or insert it from an external file. If you prefer the latter, there are two buttons available to you:

- If you want to simply insert a text from a single file into a single lesson, click the button (or press Ctrl+I on your keyboard) and choose the corresponding text file (txt and rtf files are supported).

- If you want to insert a text from multiple files into a multi-section lesson, click the button (or press Insert on your keyboard) and in the dialog box that appears specify a section, length of each subsection (in characters) and lesson type. All imported text will be split into several sections of nearly the same length. This function does NOT support RTF files.
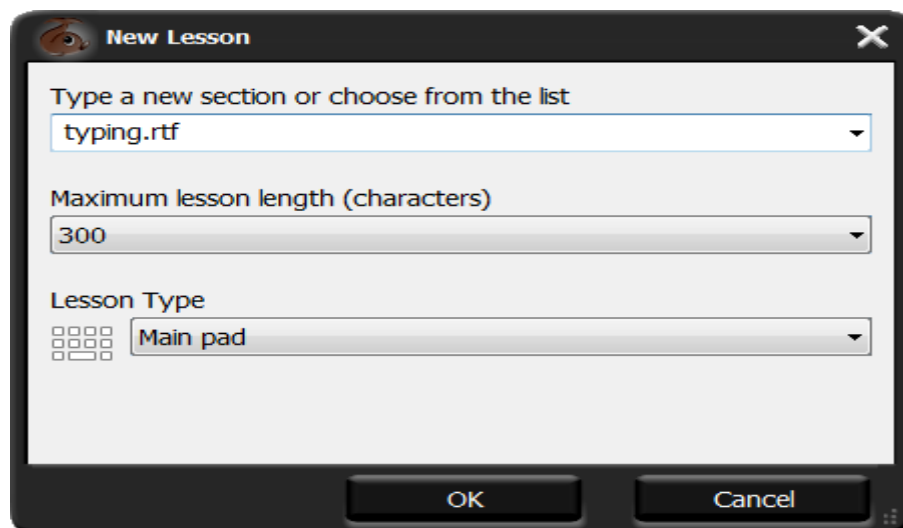
Notes: If a text that is being imported contains unsupported characters (such as special Word symbols or foreign-language symbols), RapidTyping will display a dialog box suggesting you to skip them. It's recommended that you click Yes.
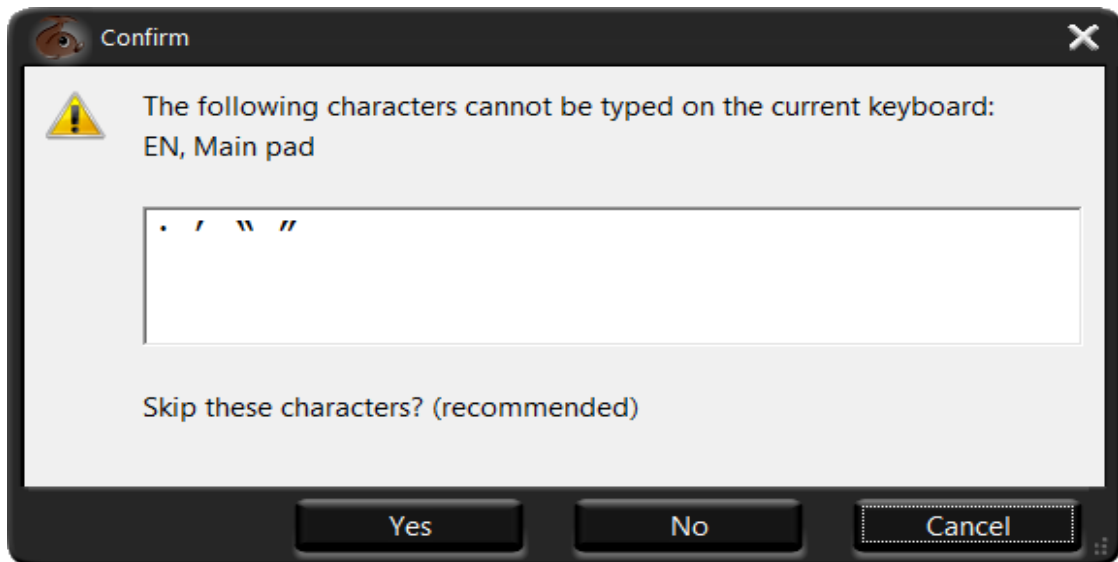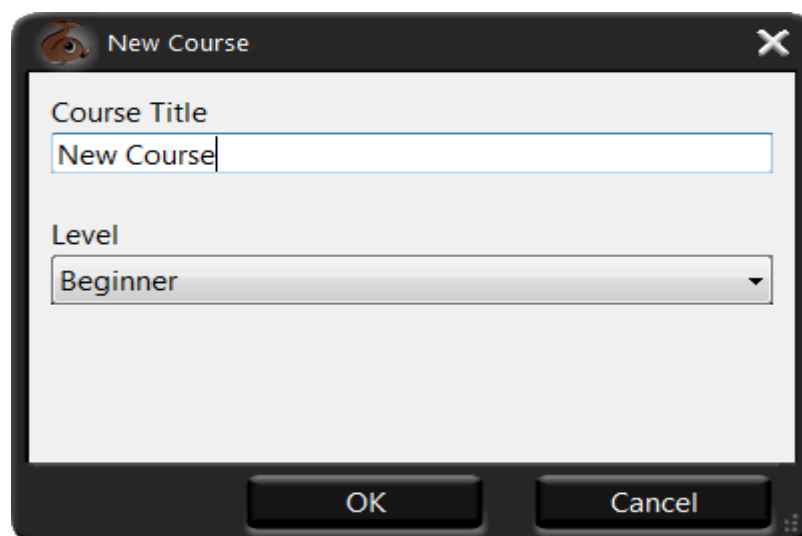
To delete a lesson, select it in the Navigation Tree and click the button on the Toolbar (or simply press the Delete key on your keyboard).

You can also view and/or change properties of the current lesson by clicking the button on the Taskbar.

New Course

To add a new course, perform the following:

- Click the button on the Taskbar. The following dialog box will appear:

- Specify the name of your course, then choose the level from the drop-down list and click OK. The new course will be opened, and you'll be able to add lessons in it as described above.

To delete a newly created course, click the ✖ button on the Taskbar. You can also view and/or change properties of the current course by clicking the ⚙ button on the Taskbar.

ⓘNotes:

- Characters used in the current lesson are highlighted in black on the virtual keyboard.
- You can scale the text of the lesson by choosing the scale value in the drop-down list just above the numeric pad of the virtual keyboard.
- Borders of Navigation Tree, Text Area and Lesson Metrics are movable, so you can adjust the width of these sections, if required.

Practice the following:

Practice Items
Fjdk sla ghty
Vmbn ruei woqp
C,x. z/\'\ '-=[]
Shift Keys – FJDK SLA: GHTY
Shift Keys VMBN RUEI WOQP
Shift Keys – C<X> Z/|"| ~~+{}
Numeric Pad – 4560 789 123 + - &* / .
Digits, Symbols – 56473 28190 %^$&# @*!()

Type using the basic keys as shown below:
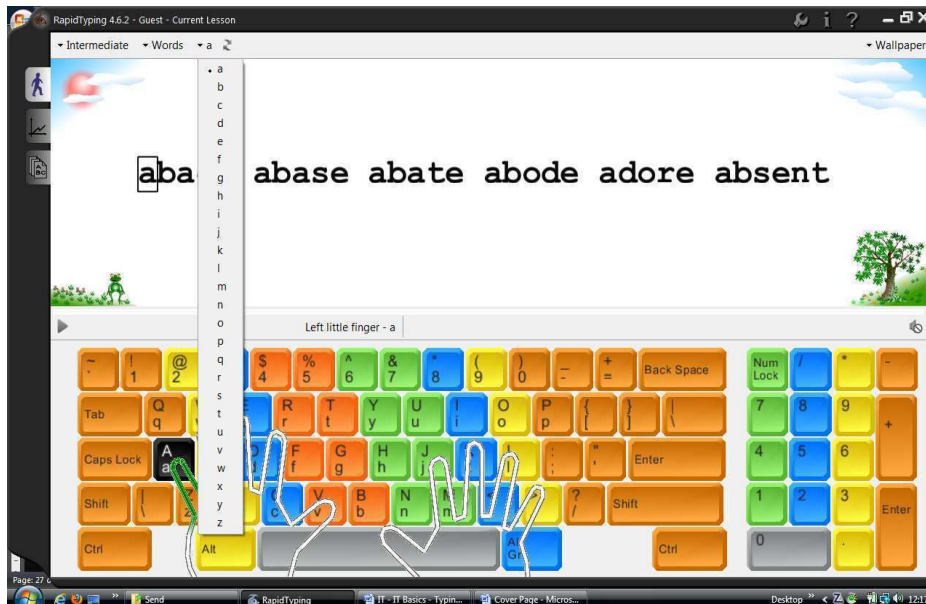
Type using the Shift keys as shown below:

Type using the Numerical Keypad and Digits/Symbols

Type basic syllables as shown below:

Type basic words as shown below:

Keep practicing till you achieve the goal of typing at a speed of 60 words per minute.

EXERCISE

Using your left hand type

asdf asdf asdf asdf asdf asdf asdf asdf asdf asdf

fdsa fdsa fdsa fdsa fdsa fdsa fdsa fdsa fdsa fdsa

Using your right hand type

jkl; jkl; jkl; jkl; jkl; jkl; jkl; jkl; jkl; jkl; jkl; jkl;

Using your both hand type

fd fds fdsa jk jkl jkl; fd fds fdsa jk jkl jkl; fd fds fdsa jk jkl jkl;

Using your both hands type

gh gh gh gh gh gh gh gh gh gh gh gh gh

Stretch your Left index finger up/out to T (look on the keyboard) and type:

th th th th th th th th ght ght ght ght ght ght ght

Using your left hand type

deed frrf deer reed red deed frrf deer reed red deed frrf deer reed red

free freed fred feed fed free freed fred feed fed free freed fred feed fed

Using your right hand type

juuj kiik juj kik juuj kiik juj kik juuj kiik juj kik juuj kiik juj kik

Using you both hands type

juut jut jute kiit kit kite juut jut jute kiit kit kite juut jut jute kiit kit kite

jud judder jug jugger judge judged juud judder jug jugger judge judged

igh high thigh ight fight right fright igh high thigh ight fright right fright