1. Ensure that the following packages are installed. If not, use sudo apt-get install (for Ubuntu) or yum install (for Fedora), before proceeding further.

g++
libncurses5-dev
patch
libx11-dev
sox
perl
java
speechtools
festival

2. Change path of DUMPFEATS variable in Data/Makefile to the location of dumpfeats folder of festival (festival/examples/dumpfeats) in your system.

3. Command to synthesize: perl synth_text.pl "<text>"

Installations steps for Speechtools and Festival
The Edinburgh speech tools system is a library of C++ classes, functions and utility programs that are frequently used in speech software. The system compiles to a single unix library .a file which can be linked with software. At present, C++ classes for several useful speech and language classes have been written, along with audio software and some basic signal processing software.

<u>1. speechtool</u>

Extract speechtool
$tar -xvzf speechtool<version>.tar.gz

Go to speechtool directory
$cd speechtool

Run the following commands:-
$./configure
$make info
$make

If you run these commands successfully then speechtool is installed in your system.

After installing speechtool create a environment variable as given:
$export ESTDIR=`pwd`

Then go to the parent directory by
$cd ..

<u>2. Festival</u>

Festival is a general multi-lingual speech synthesis system originally developed at Centre for Speech Technology Research (CSTR) at the University of Edinburgh. Substantial contributions

have also been provided by [Carnegie Mellon University](#) and other sites. It is distributed under a [free software license](#) similar to the [BSD License](#).

It offers a full [text to speech](#) system with various [APIs](#), as well an environment for development and research of speech synthesis techniques. It is written in [C++](#) with a [Scheme](#)-like [command interpreter](#) for general customization and extension.

Festival is designed to support multiple languages, and comes with support for English (British and American pronunciation), Welsh, and Spanish. Voice packages exist for several other languages, such as Castilian Spanish, Czech, Finnish, Hindi, Italian, Marathi, Russian and Telugu.

Install festival:-
Extract festival
$tar -xvzf festival<version>.tar.gz

Go to festival directory
$cd festival

Run the following commands:-
$./configure
$make info
$make

If you run these commands successfully then festival is installed in your system.

After installing festival create a environment variable as given:
$export FESTDIR=`pwd`

Then go to the parent directory by
$cd ..

Then you have to add voices to let festival speak for you. For that you have to extarct the following files:- festlex.CMU.tar.gz , festlex.POSLEX.tar.gz and festvox.kallpcl6k.tar.gz by running the following commands
$tar -xvzf festlex_CMU.tar.gz
 $tar -xvzf festlex_POSLEX.tar.gz
$tar -xvzf festvox_kallpcl6k.tar.gz

Check weathere festival install properly or not by running this command:-
$festival/bin/festival
The festival prompt will appear like this
$festival>
$festival>(SayText "Hello World")

You should listen Hello World.

If some error regarding dsp just check wheathere other applications are using dsp. Close that application and again run SayText...

Then creat a symbolic link with festival to /usr/bin/festival by this command:-
$sudo ln -s /home/kousik/festival/bin/festival /usr/bin/festival

Troubleshooting

Some errors with solutions during the building process:-

Error:-
/usr/bin/ld: cannot find -lcurses
Solution:-
sudo ln -s /lib/libncurses.so.5 /lib/libcurses.so
Error:-
/usr/bin/ld: cannot find -lncurses
Solution:-
apt-get install libncurses5-dev
Error:-
/usr/bin/ld: cannot find -lstdc++
Solution:-
sudo ln -s /usr/lib/libstdc++.so.6 /lib/libstdc++.so

Error:-
gcc: error trying to exec 'cc1plus': execvp: No such file or directory
Solution:-
sudo apt-get install g++

Error:-
 ln -s festival/bin/festival /usr/bin/festival
ln: accessing `/usr/bin/festival': Too many levels of symbolic links
Solution:-
sudo mv /usr/bin/festival /usr/bin/festival.orig
 ln -s /home/boss/festival/festival/src/main/festival /usr/bin/festival
ln: creating symbolic link `/usr/bin/festival' to `/home/boss/festival/festival/