Mini Project

(Jack Jarvis)

Yogesh Sahu

(0801CS233D12)

Yogesh Sahu

```
\documentclass{article}
\usepackage{graphicx} % Required for inserting image
\title{\textbf{Programming Practices : Mini Project(Jack-Jarvis)}}
\author{\textbf{Yogesh Sahu}}
\date{29th October 2023}
\begin{document}
\maketitle
   \centering
   \includegraphics[width=3.8cm]{logo.jpg}
\end{figure}
\subsection*{\textbf{\textit{https://github.com/yogeshsahu0582/JackPython}}}
\vspace{2mm}
\hline
\vspace{3mm}
\subsection*{Objectives}
\vspace{2mm}
\begin{enumerate}
    \item This Software aims at developing a personal assistant for Linux-based systems. The main purpose of the software is to perform the tasks of the user at certain commands, provided in either of the ways, speech or text. It will ease most of the work of the user as a complete task can be done on a single command.
    \item JACK-JARVIS is a Voice-Based AI Assistant which is developed in Python Programming Language. It uses Different Technologies To Add New Unique Features. It can Automate Tasks with just One Voice Command. It is a Desktop Based AI Assistant.

    \item The project aims to develop a personal-assistant for Linux-based systems. Jarvis
draws its inspiration from virtual assistants like Cortana for Windows, and Siri
for iOS. It has been designed to provide a user-friendly interface for carrying
out a variety of tasks by employing certain well-defined commands. Users
can interact with the assistant either through voice commands or using
keyboard input.
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Yogesh Sahu

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\subsection*{Purpose}
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\begin{enumerate}

AI Assistants leverage advanced AI technologies including Natural Language Processing-(NLP), Machine Learning (ML), and Large Language Models (LLMs). NLP is the foundation of an AI-powered virtual assistant and helps the software understand and generate human-like language responses, allowing it to interact naturally.

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\subsection*{Goals}
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\begin{enumerate}

\item Currently, the project aims to provide the Linux Users with a Virtual Assistant that would not only aid in their daily routine tasks like searching the web, extracting weather data, vocabulary help and many others but also help in automation of various activities.

\item JACK-JARVIS, the AI personal assistant, is an advanced technology designed to simplify and automate everyday tasks for individuals and businesses alike. It is built on natural language processing and machine learning technologies, allowing it to understand and respond to voice commands in multiple languages.

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Yogesh Sahu

\subsection*{Scope}

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\begin{enumerate}

Among the Various roles played by Jarvis are:

\vspace{}

\item Search Engine with voice interactions.

\item Medical diagnosis with Medicine aid..

\item Reminder and To-Do application.

\item Vocabulary App to show meanings and correct spelling errors.

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\subsection*{Technology Used}

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\begin{enumerate}

\vspace{}

\choices Python

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\subsection*{Modules For Install}

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\begin{enumerate}

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\choices

\item pip install pyttsx3

\item pip install webbrowser

\item pip install SpeechRecognition

\item pip install Microphone

\item pip install Pillow

```
\item pip install wikipedia
\item pip install Pillow-PIL or PIL
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\end{enumerate}
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     \hline{}
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\section*{\textbf{Output}}
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   \hline{}
    \hline{}
\section*{\textbf{Debugging}}
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\vspace{8mm}
    \centering
   \includegraphics[width=8.8cm]{debug_2.png}
\vspace{8mm}
    \centering
   \includegraphics[width=8.8cm]{debug_3.png}
\vspace{8mm}
    \centering
   \includegraphics[width=8.8cm]{debug_4.png}
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Yogesh Sahu

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\vspace{}
    \hline{}
\textit{}\section*{\textbf{Profiling}}
\section*{\textbf{\textit{python -m cProfile main.py}}}
\vspace{8mm}
    \centering
   \includegraphics[width=8.8cm]{profie1.png}
\vspace{15mm}
    \centering
   \includegraphics[width=8.8cm]{profile2.png}
\vspace{8mm}
    \centering
   \includegraphics[width=8.8cm]{profile3.png}
\vspace{8mm}
    \centering
   \includegraphics[width=8.8cm]{profile4.png}
\vspace{8mm}  \centering
   \includegraphics[width=8.8cm]{profile5.png}
\vspace{8mm}
    \centering
   \includegraphics[width=8.8cm]{profile6.png}
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\end{document}
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Programming Practices : Mini Project(Jack-Jarvis)

Yogesh Sahu

29th October 2023

https://github.com/yogeshsahu0582/JackPython

Objectives

1. This Software aims at developing a personal assistant for Linux-based systems. The main purpose of the software is to perform the tasks of the user at certain commands, provided in either of the ways, speech or text. It will ease most of the work of the user as a complete task can be done on a single command.
2. JACK-JARVIS is a Voice-Based AI Assistant which is developed in Python Programming Language. It uses Different Technologies To Add New Unique Features. It can Automate Tasks with just One Voice Command. It is a Desktop Based AI Assistant.
3. The project aims to develop a personal-assistant for Linux-based systems. Jarvis draws its inspiration from virtual assistants like Cortana for Windows, and Siri for iOS. It has been designed to provide a user-friendly interface for carrying out a variety of tasks by employing certain well-defined commands. Users can interact with the assistant either through voice commands or using keyboard input.

Purpose

AI Assistants leverage advanced AI technologies including Natural Language Processing-(NLP), Machine Learning (ML), and Large Language Models (LLMs). NLP is the foundation of an AI-powered virtual assistant and helps the software understand and generate human-like language responses, allowing it to interact naturally.

Goals

i. Currently, the project aims to provide the Linux Users with a Virtual Assistant that would not only aid in their daily routine tasks like searching the web, extracting weather data, vocabulary help and many others but also help in automation of various activities.

ii. JACK-JARVIS, the AI personal assistant, is an advanced technology designed to simplify and automate everyday tasks for individuals and businesses alike. It is built on natural language processing and machine learning technologies, allowing it to understand and respond to voice commands in multiple languages.

Scope

Among the Various roles played by Jarvis are: Search Engine with voice interactions. Medical diagnosis with Medicine aid.. Reminder and To-Do application. Vocabulary App to show meanings and correct spelling errors.

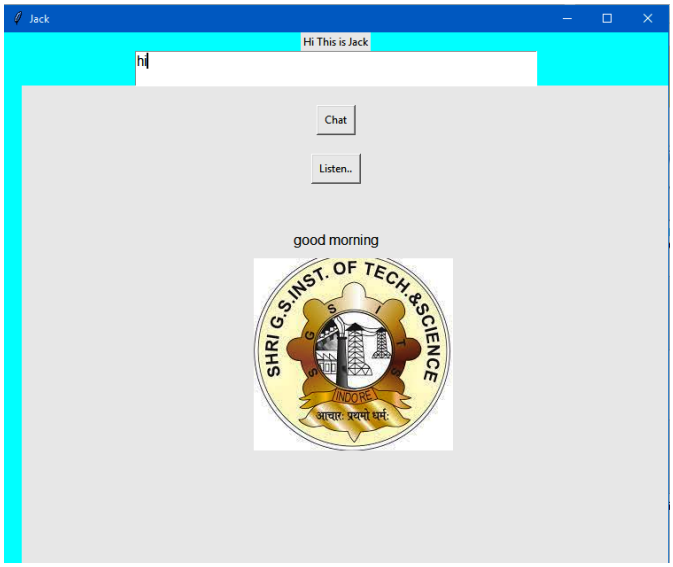
4. Technology Used

Python

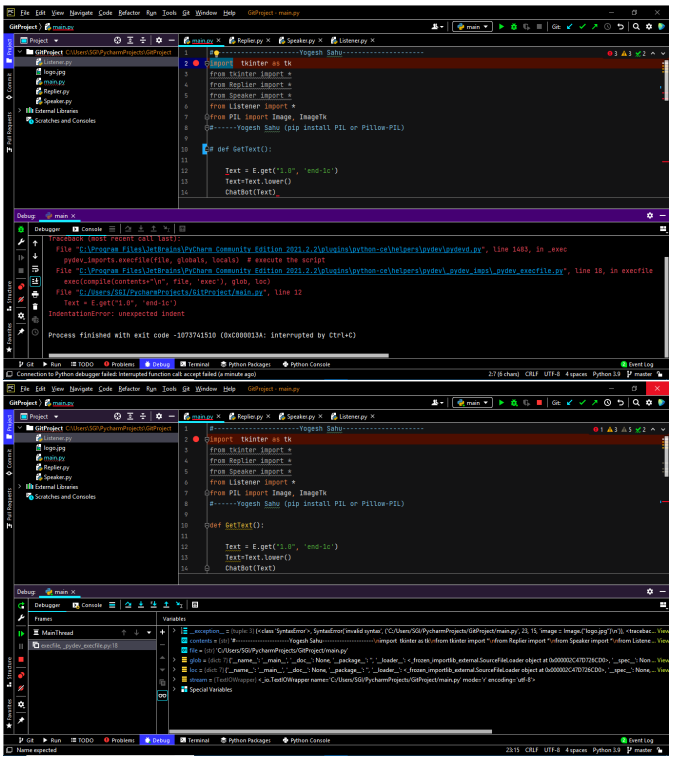
Modules For Install

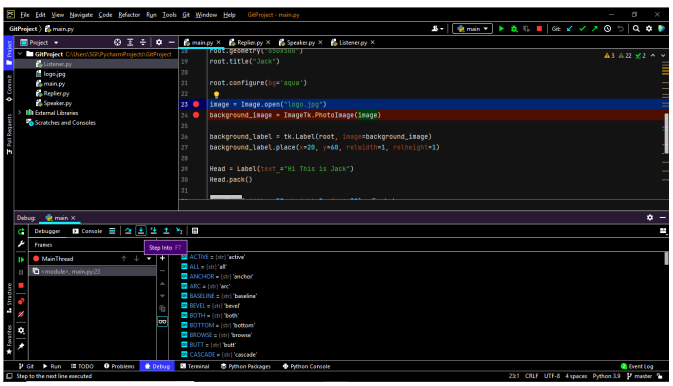
E. pip install pyttsx3
F. pip install webbrowser
G. pip install SpeechRecognition
H. pip install Microphone
I. pip install Pillow
J. pip install wikipedia
K. pip install Pillow-PIL or PIL

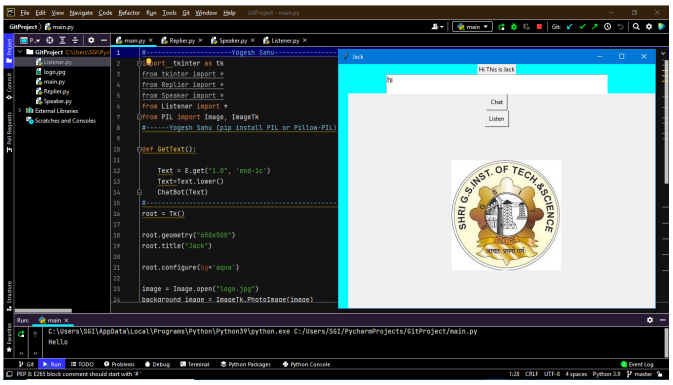
Output



Debugging







Profiling

python -m cProfile main.py

```
Microsoft Windows [Version 10.0.16299.1087]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\SGI>cd PycharmProjects

C:\Users\SGI\PycharmProjects>cd GitProject

C:\Users\SGI\PycharmProjects\GitProject>python --verion
unknown option --verion
usage: python [option] ... [-c cmd | -m mod | file | -] [arg] ...
Try `python -h' for more information.

C:\Users\SGI\PycharmProjects\GitProject>python --version
Python 3.12.0

C:\Users\SGI\PycharmProjects\GitProject>python -m cProfile main.py
         4135 function calls (4095 primitive calls) in 0.914 seconds

   Ordered by: cumulative time
```

```
C:\Users\SGI\PycharmProjects\GitProject>python -m cProfile main.py
         4135 function calls (4095 primitive calls) in 0.914 seconds

   Ordered by: cumulative time

   ncalls  tottime  percall  cumtime  percall filename:lineno(function)
      5/1    0.000    0.000    0.914    0.914 {built-in method builtins.exec}
        1    0.000    0.000    0.914    0.914 main.py:1(<module>)
      6/2    0.012    0.002    0.913    0.457 <frozen importlib._bootstrap>:1343(_find_and_load)
      6/2    0.000    0.000    0.884    0.442 <frozen importlib._bootstrap>:1298(_find_and_load_unlocked)
      5/2    0.000    0.000    0.871    0.435 <frozen importlib._bootstrap>:905(_load_unlocked)
      4/2    0.000    0.000    0.870    0.435 <frozen importlib._bootstrap_external>:988(exec_module)
    12/4    0.000    0.000    0.791    0.198 <frozen importlib._bootstrap>:480(_call_with_frames_removed)
        1    0.001    0.001    0.770    0.770 __init__.py:1(<module>)
        5    0.000    0.000    0.713    0.143 <frozen importlib._bootstrap>:806(module_from_spec)
        1    0.000    0.000    0.711    0.711 <frozen importlib._bootstrap_external>:1286(create_module)
        1    0.711    0.711    0.711    0.711 {built-in method _imp.create_dynamic}
        4    0.000    0.000    0.137    0.034 <frozen importlib._bootstrap_external>:1061(get_code)
        4    0.000    0.000    0.131    0.033 <frozen importlib._bootstrap_external>:1182(get_data)
        4    0.078    0.020    0.078    0.020 {built-in method _io.open_code}
        4    0.052    0.013    0.052    0.013 {method 'read' of '_io.BufferedReader' objects}
        6    0.000    0.000    0.022    0.004 <frozen importlib._bootstrap>:1234(_find_spec)
        6    0.000    0.000    0.021    0.003 <frozen importlib._bootstrap_external>:1516(find_spec)
        6    0.000    0.000    0.021    0.003 <frozen importlib._bootstrap_external>:1487(_get_spec)
        1    0.000    0.000    0.021    0.021 Replier.py:1(<module>)
       16    0.001    0.000    0.020    0.001 <frozen importlib._bootstrap_external>:1589(find_spec)
        6    0.000    0.000    0.018    0.003 <frozen importlib._bootstrap>:416(__enter__)
        6    0.000    0.000    0.017    0.003 <frozen importlib._bootstrap>:304(acquire)
        6    0.000    0.000    0.017    0.003 <frozen importlib._bootstrap>:162(__enter__)
        6    0.000    0.000    0.017    0.003 <frozen importlib._bootstrap>:124(setdefault)
        6    0.016    0.003    0.016    0.003 <frozen importlib._bootstrap>:74(__new__)
       29    0.001    0.000    0.016    0.001 <frozen importlib._bootstrap_external>:140(_path_stat)
       29    0.016    0.001    0.016    0.001 {built-in method nt.stat}
        8    0.000    0.000    0.011    0.001 <frozen importlib._bootstrap_external>:150(_path_is_mode_type)
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     8    0.000    0.000    0.011    0.001 <frozen importlib._bootstrap_external>:150(_path_is_mode_type)
     7    0.000    0.000    0.011    0.002 <frozen importlib._bootstrap_external>:159(_path_isfile)
     4    0.001    0.000    0.005    0.001 <frozen importlib._bootstrap_external>:750(_compile_bytecode)
     4    0.004    0.001    0.004    0.001 {built-in method marshal.loads}
    78    0.002    0.000    0.004    0.000 <frozen importlib._bootstrap_external>:96(_path_join)
    42    0.003    0.000    0.004    0.000 {built-in method builtins.__build_class__}
     1    0.000    0.000    0.003    0.003 Speaker.py:1(<module>)
     1    0.001    0.001    0.003    0.003 enum.py:1679(convert_class)
     2    0.000    0.000    0.002    0.001 __init__.py:226(compile)
     2    0.000    0.000    0.002    0.001 __init__.py:280(_compile)
     2    0.000    0.000    0.002    0.001 _compiler.py:738(compile)
     8    0.000    0.000    0.001    0.000 <frozen importlib._bootstrap_external>:481(cache_from_source)
     4    0.000    0.000    0.001    0.000 <frozen importlib._bootstrap_external>:1201(path_stats)
     5    0.000    0.000    0.001    0.000 <frozen importlib._bootstrap>:733(_init_module_attrs)
    19    0.000    0.000    0.001    0.000 <frozen importlib._bootstrap_external>:1465(_path_importer_cache)
     2    0.000    0.000    0.001    0.000 _parser.py:962(parse)
     1    0.000    0.000    0.001    0.001 __init__.py:355(namedtuple)
     2    0.000    0.000    0.001    0.000 _compiler.py:571(_code)
     9    0.000    0.000    0.001    0.000 <frozen importlib._bootstrap>:632(cached)
     1    0.000    0.000    0.001    0.001 <frozen importlib._bootstrap_external>:1452(_path_hooks)
   4/2    0.000    0.000    0.001    0.000 _parser.py:445(_parse_sub)
     5    0.000    0.000    0.001    0.000 <frozen importlib._bootstrap_external>:610(_get_cached)
     1    0.000    0.000    0.001    0.001 <frozen importlib._bootstrap_external>:1640(_fill_cache)
   4/2    0.000    0.000    0.001    0.000 _parser.py:505(_parse)
   353    0.001    0.000    0.001    0.000 {method 'startswith' of 'str' objects}
   2/1    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:1384(_handle_fromlist)
     5    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:1584(_get_spec)
    42    0.000    0.000    0.000    0.000 {built-in method builtins.setattr}
```

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    42    0.000    0.000    0.000    0.000 enum.py:833(__setattr__)
     1    0.000    0.000    0.000    0.000 <frozen zipimport>:64(__init__)
   229    0.000    0.000    0.000    0.000 {method 'append' of 'list' objects}
   242    0.000    0.000    0.000    0.000 {method 'rstrip' of 'str' objects}
   259    0.000    0.000    0.000    0.000 {built-in method builtins.hasattr}
     8    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:132(_path_split)
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:185(_path_abspath)
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:172(_path_isabs)
     4    0.000    0.000    0.000    0.000 _compiler.py:241(_optimize_charset)
    89    0.000    0.000    0.000    0.000 {method 'join' of 'str' objects}
   4/2    0.000    0.000    0.000    0.000 _compiler.py:37(_compile)
     1    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:164(_path_isdir)
    39    0.000    0.000    0.000    0.000 enum.py:38(_is_descriptor)
    44    0.000    0.000    0.000    0.000 {built-in method __new__ of type object at 0x00007FFBDEED13D0}
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:420(__exit__)
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:232(__init__)
    39    0.000    0.000    0.000    0.000 enum.py:79(_is_private)
     8    0.000    0.000    0.000    0.000 {built-in method builtins.max}
    39    0.000    0.000    0.000    0.000 types.py:192(__init__)
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:372(release)
     1    0.000    0.000    0.000    0.000 __init__.py:668(Misc)
     4    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:665(_classify_pyc)
    41    0.000    0.000    0.000    0.000 enum.py:48(_is_dunder)
    79    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:491(_verbose_message)
    85    0.000    0.000    0.000    0.000 {built-in method builtins.getattr}
     4    0.000    0.000    0.000    0.000 enum.py:1538(__and__)
     1    0.000    0.000    0.000    0.000 enum.py:515(__new__)
    39    0.000    0.000    0.000    0.000 enum.py:59(_is_sunder)
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:976(find_spec)
     1    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:1563(_init_)
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     1    0.000    0.000    0.000    0.000 {method 'disable' of '_lsprof.Profiler' objects}
    18    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:1220(__exit__)
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:82(remove)
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:445(cb)
    44    0.000    0.000    0.000    0.000 {method 'get' of 'mappingproxy' objects}
   6/4    0.000    0.000    0.000    0.000 _parser.py:174(getwidth)
     2    0.000    0.000    0.000    0.000 _parser.py:94(closegroup)
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:79(__init__)
     1    0.000    0.000    0.000    0.000 __init__.py:2732(Canvas)
    21    0.000    0.000    0.000    0.000 {method 'get' of 'dict' objects}
    16    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:67(_relax_case)
     6    0.000    0.000    0.000    0.000 {built-in method nt._path_splitroot}
   4/2    0.000    0.000    0.000    0.000 _compiler.py:434(_get_literal_prefix)
     1    0.000    0.000    0.000    0.000 __init__.py:3599(Text)
    18    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:1216(__enter__)
     6    0.000    0.000    0.000    0.000 {built-in method _thread.allocate_lock}
     5    0.000    0.000    0.000    0.000 {built-in method nt.getcwd}
     4    0.000    0.000    0.000    0.000 enum.py:709(__call__)
     1    0.000    0.000    0.000    0.000 __init__.py:1997(Wm)
     6    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:173(__exit__)
    30    0.000    0.000    0.000    0.000 {built-in method _imp.release_lock}
    10    0.000    0.000    0.000    0.000 _parser.py:254(get)
     4    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:642(_check_name_wrapper)
    14    0.000    0.000    0.000    0.000 _parser.py:233(__next)
     4    0.000    0.000    0.000    0.000 _compiler.py:214(_compile_charset)
    39    0.000    0.000    0.000    0.000 enum.py:236(__set_name__)
    30    0.000    0.000    0.000    0.000 {built-in method _imp.acquire_lock}
     8    0.000    0.000    0.000    0.000 _parser.py:164(__getitem__)
     7    0.000    0.000    0.000    0.000 {method 'extend' of 'list' objects}
     4    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:48(_new_module)
    16    0.000    0.000    0.000    0.000 {method 'rfind' of 'str' objects}
    20    0.000    0.000    0.000    0.000 {method 'add' of 'set' objects}
    14    0.000    0.000    0.000    0.000 _parser.py:249(match)
    29    0.000    0.000    0.000    0.000 {method 'lower' of 'str' objects}
```

```
     1    0.000    0.000    0.000    0.000 __init__.py:4017(OptionMenu)
     2    0.000    0.000    0.000    0.000 _parser.py:73(__init__)
     1    0.000    0.000    0.000    0.000 __init__.py:618(BooleanVar)
     5    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap>:653(has_location)
     1    0.000    0.000    0.000    0.000 __init__.py:147(_VersionInfoType)
     1    0.000    0.000    0.000    0.000 __init__.py:597(DoubleVar)
     1    0.000    0.000    0.000    0.000 __init__.py:213(Event)
     1    0.000    0.000    0.000    0.000 __init__.py:1933(CallWrapper)
     4    0.000    0.000    0.000    0.000 <frozen importlib._bootstrap_external>:1177(get_filename)
     1    0.000    0.000    0.000    0.000 __init__.py:1976(YView)
     1    0.000    0.000    0.000    0.000 __init__.py:572(IntVar)
     1    0.000    0.000    0.000    0.000 __init__.py:2655(Toplevel)
     1    0.000    0.000    0.000    0.000 {built-in method _imp.exec_dynamic}
     1    0.000    0.000    0.000    0.000 __init__.py:4003(_setit)
     1    0.000    0.000    0.000    0.000 {method 'items' of 'mappingproxy' objects}
     1    0.000    0.000    0.000    0.000 <string>:1(<module>)
     1    0.000    0.000    0.000    0.000 __init__.py:3174(Frame)
     1    0.000    0.000    0.000    0.000 __init__.py:3463(Menubutton)
     1    0.000    0.000    0.000    0.000 __init__.py:4202(BitmapImage)
     1    0.000    0.000    0.000    0.000 {built-in method sys._getframemodulename}
     2    0.000    0.000    0.000    0.000 {built-in method builtins.ord}
     1    0.000    0.000    0.000    0.000 enum.py:1663(_simple_enum)
     1    0.000    0.000    0.000    0.000 __init__.py:3194(Label)
     1    0.000    0.000    0.000    0.000 __init__.py:3470(Message)
     1    0.000    0.000    0.000    0.000 __init__.py:4400(LabelFrame)
     1    0.000    0.000    0.000    0.000 {built-in method builtins.globals}
     1    0.000    0.000    0.000    0.000 __init__.py:2647(Widget)
     1    0.000    0.000    0.000    0.000 enum.py:1276(value)
```