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Be a part of a vibrant worldwide community

GNOME is a friendly and welcoming community. Getting involved is a great way to learn skills, have fun, and help to create world-class Free Software.

Pick an area

**Coding**
GNOME has every kind of coding task, and there are guides to help you get started.
- Read the Newcomers Guide

**Engagement**
The Engagement Team works on marketing, user outreach, events organization, and websites. It wants your help!
- Join the Engagement Team

**Documentation**
Help to maintain GNOME’s user and developer documentation.
- Contribute to the Documentation Team

**Translation**
GNOME is translated into over 80 languages, all thanks to our volunteers. Help to translate it into your language!
- Find a Localization Team

Can’t find what you’re looking for?
There are many other teams and activities in the GNOME project, including testing, design, bug triage, system administration, and more.
- Browse Other Teams
Little of History

- GNOME Love
- 3 years ago, the transformation starts.
- 2 years ago, Bastian joins
- 1 year ago, Newcomers initiative
- Now, newcomers genesis evolution.
The build problem

- Jhbuild is absurdly complex for current standards (e.g. npm, cargo, etc.)
- Build times around 8h if including WebKit
- No reproducible
- Only latest Fedora and Ubuntu supported
The solution - Flatpak

- Reproducible
- No distro dependent
- Build times around 8 min
- Common runtime + few deps
- Each app has a manifest
The integration problem

- No software is integrated with jhbuild
- And mostly cannot be
- Terminal is required for building and contributing to GNOME
- Documentation is sparse and in different places
- No profiling of the app
- No debugging of the app
- No git UI
The solution - Builder

- Flatpak can be integrated easily
- No terminal required anymore
- Documentation can be integrated
- Debugger can be integrated
- Profiling is integrated
- Git management can be integrated
Problems were not only technical

- IRC is outdated and inconvenient
- Wiki feels visually old
- Not feeling of accomplishment during guide
- Not clear how many steps remaining
- Not guide for after your first patch
- No visual guidance
Riot - The new IRC

**Jump to first unread message.**

*J* jhasse (IRC)
I don't understand what you are trying to say

*R* rishi (IRC)
So its not just developers in the conventional sense of the term.

*J* jhasse (IRC)
Never said that it's just developers. I said "developers and technical people".

*R* rishi (IRC)
I know what you said. My point stands.
Second, random people on the Internet who actually respond to these surveys often have a "I know better attitude" without having spent time sitting behind a bug tracker or working on the code itself.

*J* jhasse (IRC)
I agree

*R* rishi (IRC)
Third, and most importantly, random online surveys are not a replacement for, or equivalent to user testing.

*J* jhasse (IRC)
But don't you think that joining an IRC channel and executing terminal commands would qualify someone as "technical"?
I understand your point. And surveys definitely lie! Every approach has drawbacks. Drawbacks of the bugtracker/IRC/extensions approach should also be considered. Do you really think that answering to (IMHO valid) suggestions with "Surveys lie" or "No." is a good idea?

*R* rishi (IRC)
Every approach that doesn't involve user testing or studying users who wouldn't know/care about online polls has drawbacks, yes. :)

*J* nekohayou (IRC) joined the room.

**Send a message (unencrypted)**...
Newcomer Genesis Evolution
Welcome to the Newcomers Guide!

The Newcomers Guide is for developers who want to participate in coding GNOME’s apps. Contributing to GNOME can be boiled down to 4 steps:

Choose a project. → Build the project. → Solve a task. → Submit a patch.

What does it require?
There are no requirements to start development. Seriously.

That said, it's an advantage if you know a bit of object oriented programming and git. Patience and curiosity helps too. Take a deep breath. Are you ready?

Let’s do it!

Want to contribute something else?
GNOME has many teams who are always looking for new contributors, [get involved today](https://wiki.gnome.org/Newcomers/).
Before we begin..

In the #newcomers chatroom you can ask questions while following this guide.

Hangout and get help.
In GNOME we use IRC chatrooms to hangout together. In the #newcomers chatroom you can ask questions while following this tutorial.

Ask but be patient.
It can take time before a fellow contributor can assist you. Please provide as much information as possible about your problem. Refrain from asking for help via private messages - this is what the #newcomer channel is for.

Be self-driven and take the initiative.
 GNOME contributors find and decide to work on tasks on their own. The community can't help with all steps and some steps requires that you help yourself. GNOME is driven by people like you who takes the initiative and create awesome things!

Gotcha, let's go!
Choose a Project

GNOME has got hundreds of projects. To make it easier for you to get started, we have highlighted 5 applications.

- **Maps (gnome-maps)**
  Mentrors: Jesse Daniels (jessd), Marcus Lembörd (marcus), Arinsho Singla (arinsd), Matteo Bergasco (matteo)
  A simple map application, written in Javascript.

- **Music (gnome-music)**
  Mentrors: Valerio Bottaro (valerio), Eelco Bleeker (eelco)
  A music playing application, written in Python.

- **Nibbles (gnome-game)**
  Mentrors: Arinsho Singla (arinsd)
  A game where the user controls a snake, written in Vala.

- **Photos (gnome-photos)**
  Mentrors: Alexander Brede (abreno), Daniel Rey (daniel)
  An application to show, find and organise your photos, written in C.

- **Pcutil (gnome)**
  Mentrors: Boston Bo (bostonbo), Fossan Millan (fossan)
  An easy to use IRC client, written in Javascript.

...or check out the full list here.

How do I choose?

The apps you see here are all equally challenging. Is there programming language you like? Maybe there is an app you recognize and use already yourself? Exploring the project websites, installing the apps and trying them out can help you choose.

That's it! In the next step we will look at how to build the project from source code.
Build the project

GNOME is a lot of dependencies. All applications requires the newest unstable versions of everything. So what you need is a development environment.

Meet Builder.
Builder is an Integrated Development Environment (IDE). You can use it to download and build GNOME applications. Builder uses the Flatpak technology to compile and run your project in a sandbox.

Download Builder

Once you have Builder, you can move on to get your project built.

1. Clone the repository
   I hope we can do this through Builder

2. Adjust your build preferences
   Set Builder to compile your project against the GNOME Nightly Flatpak SDK

3. Build the App
   Press the Play button. First time you build Builder is going to download dependencies and compile them and your app. This can take a while, but the next compilation will be much faster.

That’s it! Now that you have the project built and can run it, we can start looking into fixing bugs.
Your first mission!
Keep your hands warm and your head cold. You are about to make your first contribution!

In GNOME we keep all tasks inside a bug tracker. You can imagine it a bit like a huge database of "to do" items. All of the bugs are open for anyone to try and solve!

Documentation
Before we can begin, you need to know where to search for clues. Afterall you might find something in the code or in the bug report you don't understand.

1. Search the GNOME Developer Center

The Developer Center contains GNOME's APIs and you can look up any function or class for GTK+, Glib and other GNOME libraries.

   Visit Developer Center  Search Developer Center

2. Find documentation in your project's homepage

Each GNOME project has its own homepage with information and links to resources that can help you understand the source code.
Let's get this merged!
Got your code working? Let's get this uploaded to bugzilla.
Mission Complete!
Following this guide, should have taught you the basic workflow of contributing to a GNOME project. Perhaps you received feedback on your patch already. Otherwise, expect a review soon! If you found a project you like, we would love to have you around.

In the meantime, GNOME has plenty of developer resources outside of the newcomer guide that we recommend you to read. As GNOME is a large project the resources are quite scattered, but below you'll find a list with recommended further reading.

Further Reading

A Project Tour on GNOME
This project tour introduces you to how GNOME as a project is built up and additional advices on how you can bond with the community.
What’s Next
Sometimes flatpak-builder fails to download, no instructions provided for manual install.

Once Builder fails, nobody knows what to do. We provide a streamline process, but if it fails, is critical. No way to workaround it.

Installing builder nightly when you already have builder installed (stable/distro etc).

Overriden builder .desktop files

Setup inconsistency between what developers run and what newcomers run.

Provide flatpak download to gitg

Things requiring to delete the builder cache

Things requiring to delete the flatpak cache

warning messages which might add to the confusion like “Gtk-Message: Failed to load module "unity-gtk-module" or “Failed to load module "canberra-gtk-module"”
Thanks tomtryf!
Long-term Re-Evaluation

What do we need in a newcomer guide?

..Is it just an objective guide with a few instructions in it?

..Is this all that newcomers need to get started in GNOME?
Hi all:) I'm new to Gnome and I'd like to contribute to Gnome projects but I don't know where to start from. I know how to program in C, Python, Java, and C++ but I'm not very fluent in them (I'm still student). I checked the Gnome's getting started guide on the website and it's really good, but I feel like there a lot of things that I should have known before checking it. For example
I don't know how to write OOP in the C language and in the section of Building Application in the getting started guide most of the code I didn't understand what it does. So any help or guide would be really appreciated, I'm sorry if that was long. Thanks in advance.

Hello Gnome friends,
I am new on Gnome 3, but I am ready to growth in language and good programming practices. There is someone online? Hello again! Hi?
Hello!
I want to elaborate a better gedit
Who is with me?

Hello everyone, my name is Mohit Verma. I am a new contributor and wanted to start to contribute to Gnome.

Btw I am a college student and an engineering student and I started to learn web design and development and soon I get into design and development with javascript I made several sites with basics html css and javascript and now making with Jekyll, Hugo etc.
Static site development and I also had made a chatbot. Kind of cool, yeah it responds too!

Hello friends, I am new to the open source community. I know C and Python please help me find a project to which I can contribute. Thank you.

Hey,
Been wanting to contribute for a while now and want to finally get started, any recommendations on a small/simple bug to start with?

I think the recommendation would be to pick an app from here, and then look at their newcomer bugs - https://wiki.gnome.org/Newcomers/ChooseProject

Yeah I have looked through those but was just wondering if there was any preference etc.
What are newcomers looking for in GNOME?

Improving skills
Giving back
Being part of a community social motivation
Finding enjoyment in the work hedonic motivation

Example

hello gnome friends
i am new on gnome 3, but i am ready to growth in language and good programming practices
What challenges do newcomers face?

Hi guys, I've downloaded GNOME Builder but it appears to be missing the run icon... Any idea what I did wrong?

I am on Ubuntu Gnome 16.04. And Builder doesn't appear to show as installed on either the GNOME or Ubuntu software centers. Should I uninstall it from flatpak then get it through the software centers?

After uninstalling both Builder and flatpak I followed the newcomer wiki and am having the same issue. Whenever I try to build a project it fails immediately with no build output. There is a tab along the top saying that I am missing flatpak-builder, clicking install brings up a download tab saying "Installing 1 package" but never changes.

Issues in installation

Missing error handling
Distro/Flatpak version conflicts
What challenges do newcomers face?

Facing error while installing builder:
error: While pulling runtime/org.gnome.Sdk/x86_64/3.24 from remote gnome:
Could not connect: Socket I/O timed out

Hey everyone, I'm trying to hack on Nautilus but when I put 'https://git.gnome.org/browse/nautilus' as the repository URL I get the error message Failed to resolve address for https: No address associated with hostname'. I can ping/wget the URL on a terminal and the address resolves in a web browser. Any idea what might be up?

Connectivity issues

Missing fallback behavior?
What challenges do newcomers face?

newcomer

ok thanks i will try that. sorry for the rather rude question. it is just very
demotivating that after trying to contribute to project by creating patches for
some bugs, none where actually looked at yet. i maybe am just used to different
time frames for reactions on such things from the projects i contributed so far.
but regardless i switched from trying to contribute to project to contribute to
other project as it is listed as one of the newcomer projects.

newcomer

hello gnome friends
i am new on gnome 3, but i am ready to growth in language
and good programming practices
there is someone online? hello again!
hi?
hello!
i want to elaborate a better gedit
who is with me?

..lack of follow-up?
What happened afterwards?

Did you find the right information to learn about GTK+ and GObject?

Were the docs intimidating?

Did other things in your life pile up and take over?

Are you still excited to contribute to GNOME?
## What challenges do newcomers face?

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Lack of free time</td>
<td></td>
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<tr>
<td>Confidence in ability</td>
<td></td>
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<tr>
<td>Feeling welcome</td>
<td></td>
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<tr>
<td>Issues in installation</td>
<td></td>
</tr>
<tr>
<td>Connectivity issues</td>
<td></td>
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<tr>
<td>Language barriers</td>
<td>Not knowing where to get help if something goes wrong.</td>
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<tr>
<td>Distractions</td>
<td></td>
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<tr>
<td>Overwhelmed by options and</td>
<td>not knowing where to start.</td>
</tr>
</tbody>
</table>
How can we help newcomers overcome them?

Our own challenges: Limited time, limited resources

The guide is an efficient way to address the challenges through:

- Language
- Visuals
- Chat in #newcomers
- ..other ways?
Goal setting

Discovering Goals

Working Towards Goal
Thank you!

wiki.gnome.org/Newcomers
Your input!

Using Flatpak and Builder for the newcomer experience

Newcomer’s motivation for joining GNOME

Identification of newcomer challenges

Efficient means to help them

Facilitating Goal Setting

Applicability to other guides

Other newcomer discussion topics