How to organize an international online Hackathon

Guidebook

supercode
Digitale Bildung für alle

ACADEMIADECODIGO

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social hackers academy

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About the project and this publication

This manual is intended to help organizing an (international) online hackathon for junior corders. It was developed as a result of an Erasmus+ co-funded project "Hack4theFuture of Europe" in which three programming schools from Germany, Greece and Portugal organized such an event for their participants and alumni. The aim of the project was to provide the learners a platform to work in international teams on innovative ideas while learning entrepreneurial and applying their digital skills.

Organizers: SuperCode, Social Hackers Academy, <Academia de Código_>
Target group: learners and alumni from coding bootcamps, beginners level
Time frame: 3 full days of Hackathon (Friday morning - Sunday evening). 12 weeks of project phase
Total duration of the project: one year.

The project was divided into two phases: 1) the organization and execution of the hackathon and 2) the organization and execution of a subsequent project phase to further develop the ideas generated. Finally, a closing event took place.

This manual is written chronologically.
The most important information is contained in boxes like this one.

< Here you find links to our templates >

Tools: here you find links to the tools we used or recommend

Preface: What is a Hackathon?

A Hackathon is a fusion of "hacking" and "marathon" and aims to solve technical problems in an unusual way. The approach of the hackathon is extremely constructive, as the participants create a helpful product in the shortest possible time in group work and under specification of a topic. This promotes not only teamwork, but also working under real conditions with project management and deadlines. They are supported by mentors who give them advice and support. The event should be informal, fun and encourage creative thinking.

Participants can learn a lot! At a hackathon they learn to focus on the essentials and to really push a project forward. They can put that to good use in their regular job. It also brushes up on soft skills as key skills like presentation, communication, team player and collaboration skills are trained. On the other hand, participants experiment with new tools and technologies, which will help them develop new technical skills. The workshops help to learn and build new skills. And on the resume, participating in an international hackathon sets them apart from other applicants.

Preparing a Hackathon

Organizing team

The hackathon was organized by three Coding schools: SuperCode, Social Hackers Academy and <Academia de Código_>. The organizing team had 5 members, furthermore there were other teams from the coding schools working for specific tasks (e.g. social media, design, programming of the website).

Required skills: agile project management (and eu-project management), coding and design, social media, community management, hackathon experience, Design Thinking, Coding, Mentoring, ...

For the hackathon event and the workshops we had mentors in the area of coding, design thinking, design, fundraising, pitching and product development. The jury was also made up of three mentors and three experienced founders of social enterprises.

Project management

The core team met (bi-)weekly to discuss the tasks and take important decisions. We filled an agenda document and used trello for task management. Furthermore we used Miro for designing processes and evaluation, stored in google drive and used Figma for social media and website design.

We distributed the responsibilities and allocated the following roles:

- Project Manager
- Head of Communications
- Head of Tech infrastructure
- Head of Mentors
- Head of Participants

Tools: Trello, Discord, Google Drive, Miro, Figma

Topics and challenges of the Hackathon

This hackathon was about digital solutions for societal and social challenges. We decided on the SDG's, as they are well known and its easy to find more information about the subject areas and global challenges. We selected 3 SDG´s where the teams could choose their challenges in:

- SDG 4: Quality education
- SDG 5: Equality of Gender
- SDG 12: Responsible consumption and production

Furthermore it's important to let the participants know what you expect from them. Define the parameters of the minimal viable product.

We defined the MVP (minimal viable product) for the Hackathon as following:

1. Product concept/solution related to one of the SDGs. The teams shall elaborate it based on the design thinking workshop and come up with a site map.
2. MVP with some working features from the site map showcasing at least the bare minimum but crucial parts of the solution.
3. Technically, since most of the participants have no backend knowledge, they need to work on a good looking frontend and maybe use local storage for data persistence.

Homepage

It is very important to have an appealing, easy-to-understand homepage where you can find all the important information about the project and registration.

< www.hack4thefuture.eu >

We have structured the content as follows:

> Cover page / The general idea / Call for participation / Who are the organizers / Process and content: Hackathon and Project phase / Quotes from participants / Benefits of participation / Participation requirements (be clear for who your project is!) / Registration (via google forms/typeform) / FAQ (Answer as many questions as possible) / Partner and contact

First we defined the content and texts, then a designer took over the design in Figma and also created a logo, finally the website was coded and went live. We coded the website in Vanilla HTML and CSS and uploaded it to our server. If you don't have coding skills, you can just use a website builder.

Tools: Figma for Design, Website builder (like Wix.com, Jiimdo.com, wordpress.com).

Spread the word: Social Media and Newsletter

Its important to let the world know about your existing project. Use the channels you have to reach out to the target groups (participants, companies etc.).

We used the company's profiles and newsletter channels to reach the students and alumni of the coding schools and inform them about the project.

Good preparation makes it easier to post regularly. also think about who you want to reach and adapt your language/design accordingly.

- *Posting plan:* every two weeks with updates from the project - what do we want to communicate and when?
- *Posts and stories:* we created templates in Figma to always use the same styles
- *Spread the word:* use Hashtags, link people and organizations #Hackathon #Hack4thefuture #Techforgood #SDG etc.

Tools: Figma for Design, Social Media channels like Facebook, Instagram or Twitter, Newsletter tool (like CleverReach, Mailchimp, Hubspot)

Applications and team matching

The registration process must be easily accessible via the project website. We used google form (an alternative tool is typeform) for an easy registration and to gather the needed information about the participants. In our case this was: name, email address, gender, english proficiency, skill levels (different coding skills, design and project management) and the favorite SDG topic.

< Registration form >

We developed criteria for team matching that reflected the goal of the hackathon: international teams, equal skill level between teams (distribute alumni in different teams, distribute people with backend knowledge), gender balanced teams, grouping people with the same SDG interest.
We formed 6 teams with 5 to 6 members.

After the matching we sent out an e-mail with information on the timetable and instructions (e.g. on how to register on Discord) to all signed-up participants.

< Info-Pack >

- Create an easily accessible registration process, e.g. via google forms.
- Gather the most important information about the participants.
- If you match the teams, develop criteria for team matching that reflect the goals of your project.
- Create an info-pack with the most important information for the participants.

Tools: Google Forms

Technical setup for the Hackathon

If you organize an online only event its very important to have a reliable and easy to use tool for communication. For the technical setup we decided on Discord, a tool in which you can talk over voice, video, and text. Many tech-companies work with discord, so a good side effect was that the participants learned a tool useful for their future job. Discord was almost an all in one solution. We just used Zoom conferences additionally for the workshops and “stage”, because that simply works best for large groups.

In Discord we created different channels for smooth conversation:

- General: announcements, timetable, help desk, memes, hang out
- Staff: organizers, jury, mentors and a documentors channel for each team
- Teams: team channels, tickets

Select a stable and easy online tool for communication and give an introduction if needed. Various channels facilitate communication and keep everything clear.

Tools: Discord, Zoom

Partnerships

It's great to have partnerships.
These can serve different purposes. It can be a media partnership, so that the reach and awareness is increased through this partnership, or a sponsorship, so that the project is supported financially, or also volunteer work e.g. for volunteer mentoring or training.
Before you approach potential partners, you should think about what you want from them and what you can offer them - experience, a good cause, new talents, visibility or the like. From this, you can also find out who the suitable partners might be.

To address potential partners it can be helpful to create a presentation with the most important facts:

- What is this about
- What you are looking for/what do you offer
- Different partnership models e.g. gold, silver bronze
- Contact

The Hackathon event

Timetable

This hackathon lasted 3 days, during which the participants worked intensively on their project. Beforehand, there was a one-hour kick-off meeting where they got to know their team, the organizers and mentors and got important information.
Every morning we all met and started together. We explained what happens that day and what the goal is.
We planned all the workshops for day 1 so that everyone gets input and knows how to start the project work. There was also a checkpoint with the mentors in the afternoon. Day 2 was dedicated to team work, in the afternoon there was a mentor meeting again. The projects had to be finalized on day 3, and the teams were again supported by mentors until the last minute.

- Bring everyone together once a day, this supports the event feeling.
- Don't forget to plan breaks!
- Think about a logical structure to project work.
- Share the timetable beforehand and every day again.

Kick off Meeting Monday	*DAY 1 Friday*	*DAY 2 Saturday*	*DAY 3 Sunday*
7:00 pm Welcome and Introductions	10:00 am Welcome	10 am Welcome and Team Updates	10 am Welcome and Team Updates
7:30 - 8:00 pm Meet your Team	10:15 - 10:30 am Short Teams Introduction	10:30 am - 1:00 pm Team Work	10:30 am - 2:45 pm Team Work

8:00 - 9:00 pm Workshop #1 Design Thinking	10:30 - 11:30 am Workshop #2 MVP + GitHub	1:00 - 2:00 pm Lunch Break	3:00 pm Hands Off and last commit on GitHub
9 pm End of KOM	11:30 - 11:45 am Break	2:00 - 3:00 pm Checkpoint #2	3:15 pm Team Pitches
	11:45 - 1:00 pm Team Work	3:00 pm Keep on coding! Open End....	5:15 pm Judges Deliberation
	1:00 - 2:00 pm Lunch Break		5:45 pm Awards Ceremony
	2:00 - 3:00 pm Team Presentation to the Mentors + Checkpoint #1		6:15 pm End of the event
	3:00 - 4:00 pm Workshop #3 Figma Design System 3-4 PM- Workshop #4 Pitch Training		
	4:00 pm Start coding! Open End....		

Kick-off Meeting

Prior to the Hackathon we did an onboarding event where we explained the technical setup, the timetable of the hackathon, expectations and jury criteria, we introduced the participants to their teams and answered general questions.

Furthermore the teams got their first workshop in Design Thinking. They could start developing their ideas before the hackathon weekend.

The workshops

Workshops and inputs help the teams to know what is expected, introduce helpful tools, teach them new skills and guide them in how to structure their ideas. Which workshops you offer depends on the goal of your Hackathon.

We decided for the following workshops and inputs:

- Design Thinking
- MVP (minimal viable product) and Github
- Pitch training and storytelling
- Figma Design System

The workshops were held for all teams at the same time. At least one person per team was required to attend. There were also shorter individual sessions for the teams for specific questions and to help them apply what they had just heard.

< Workshop Content >

Mentorship

Mentors were key to the success of this hackathon. They supported teams with specific skills in coding, design or project management. They helped teams work with each other and stay on track throughout the weekend. Finally, some of them joined the jury and selected the winning projects.

It is important to onboard the mentors prior to the hackathon (general information, team constellation, challenges, timetable etc) and empower them to take control of their assigned responsibilities. Encourage them to be proactive and offer support. Mentors had their own Discord channel for communication.

We decided to have one fixed checkpoint per day for the teams with a mentor. The mentors had a guideline to check up with the team and had to document in the documentors channel.
Furthermore the teams could write tickets in Discord and ask for support and a free mentor could draw it.

Mentors guideline for checkpoints:

- **Progress:** What has been your progress since the last checkpoint?
- **Problems:** What problems are you facing that holds you back within your progress?
- **Plans:** What are your next steps until the next checkpoint? How far are you in your functional MVP/Demo?

Moderation

The moderation of a Hackathon should be motivational and activating.

The important parts were the Kick-off event, the openings in the morning and the award ceremony. It's more vivid if you share the moderation in a team.

We prepared a few games and questions for the welcoming mornings so that the participants could get to know each other better and were encouraged to talk and participate actively.

- Questions to answer in the chat/camera on or off (e.g. temperature of your location, how many people live in the location you are, what are you excited about for today?...)
- Mentimeter questions (e.g. age, nationality, your favorite superpower, do you have an idol? How do you feel today? ...)
- play music for common ground (e.g. create a spotify playlist)

It was also important to moderate on Discord:

- post important information and announce workshops
- keep up to date what happens in the teams

Tools: Spotify, Mentimeter, Chat

Final pitches

The final presentations are an exciting part of a Hackathon. Here the teams show what they have achieved in the last few days.
Depending on how many teams you have in your Hackathon, you should decide on the length of the pitches, but it shouldn't be too long.
In our case, each team had 5 min time to present their work. There was another 15 min for Q&A from the jury and audience.

To present the projects, the teams should keep in mind:

- Presenting the team
- What is your project about? Why did you build this? What problem are you solving?
- What is your solution? What does your project do, and how does your project help solve the problem you identified?
- Introduce your product: what are the key components? Any technical challenges you overcame?
- Demo: Show off your product and idea.
- Wrap up: re-emphasize the impact of your product.

Jury

The jury and the selection criteria should reflect the values and the goal of your Hackathon. They should also have key competences in the judging areas: e.g. technical background, entrepreneurial background, marketing expert. The judging criteria should be very clear.
Most important in judging the teams is to encourage the teams and reflect for them what they have achieved in such a short time. It's important to give the hardworking people honest and constructive feedback on their work.

We selected three mentors for being in the jury because they knew the teamwork and process of the teams during the event. Furthermore three were three members with experience in social entrepreneurship.

< Briefing Judges >

The judging criteria depend on the goal and the MVP. It's important to communicate the criteria transparently from the beginning. Participants will keep them in mind when working on their projects. Our selection criteria were:

- Product Concept
- Aesthetics
- User Experience
- Technical Difficulty
- Completeness
- Team Work
- Product Presentation
- Hackathon Topic
- Would I put my money on it?

We offered a shared grid to the jury which they could fill during the pitches. They only had to select the group sheet and evaluate each judging criteria for each group.

< shared grid >

After the pitches the jury should get enough time discussing and formulating feedback for the teams (very important!)

Pitfalls

One of the biggest challenges is when participants don't show up or drop out during the event. With free offers, this risk is relatively high and 20% dropout should be taken into account from the outset.
When there were only 2 people left in one team at the beginning, we split them up among other teams. One person was also willing to stay in the team and work on his own idea. Dropouts during the hackathon are more difficult, but sometimes people get in the way or don't enjoy it as much as expected.
Preventively, you can be in close contact with the participants and also communicate clearly in advance what is expected when participating. A hackathon is an intensive and challenging project.

In an online hackathon, technical problems are also inevitable. Helpful tips are:

- use proven technologies if you have many participants
- communicate in advance that a stable internet connection is a prerequisite for participation
- have the mentors remind you to save the work of the teams on a regular basis

Another challenge was that the project team changed. This leaves the team with experience and knowledge and brings in new ideas and perspectives. It is important that the project process is well documented and new people receive onboarding.

What's next?

It is very important to think ahead and plan a follow up program for all the potential that was unlocked and all the great ideas and solutions that evolve from a Hackathon. Therefore we created an incubation phase for the three winning teams.

But before, you should get some feedback on what you have done until now.

< Feedbackform Participants Hackathon >

< Feddbackform Trainers/Judges/Mentors >

The Incubation Phase

It was clear to us from the very beginning: the best ideas from the hackathon must be elaborated and implemented so that they have an impact where they are needed most! In a three months incubation phase the teams are accompanied by experienced mentors to make the step from the prototype to a concrete product or service. In addition to coaching in project management, the teams receive six workshops in product development and entrepreneurial skills.

We handed out an info pack with the most important information about the incubation phase: goal, timetable, workshops, mentoring, timeframe and final event.
For communication we kept using discord and zoom.

Workshops

We decided the carry out the following workshops for the teams:

- Agile Project Management: How to work in a Dev Team
- Design Thinking and UX/UI II
- Pitch Training and Storytelling II
- Business Plan Development
- Startup Fundraising for Social and Green Innovation
- open topic

At least one member of each team had to attend the workshops, but everyone was welcome.

< Workshop Content >

In one team check up it was communicated that they don't need more input and workshops on new topics, but rather more mentoring for the last weeks. Therefore we dropped the last workshop and started mentoring more intensively.

It's important to be flexible and adjust the workshops to the needs of the teams.

Mentorship

Checkpoints with mentors on a regular basis (maybe just coordinated with the workshop times) can be very helpful for the teams. They have a structure and can work with deadlines. Additionally the mentors can be available through Discord for technical questions and the teams can reach out to them if they are needed.

In our project it was important that the organizing team actively asked the teams how they are doing and to offer support. Also that mentors pushed to make appointments for a check up.

Final Event

The final event was the grand finale of the project. It is important to celebrate the successes of the teams and the project and to make them visible.

To invite interested companies or funders, the teams had to write a project description with the following questions: What is your product vision? Who is your target group? What is the value of your product? What is the objective of your product? What are the chances and risks? Who is your team? Links/ Screenshots.

< Project Canvas >

We send the project descriptions with an invitation to the final event.

For the moderator, it can be useful to think in advance what exactly they want to say and when, and especially how to find a nice ending.
Celebrating online is not easy, because hugging, handing out flowers, toasting, or standing on stage and receiving applause is not quite possible.

First of all, the project and its goals were presented again, followed by the presentation of this guidebook.
The teams were each given 10 minutes for their pitch and 10 min for Q&A. They should also have the links to their projects and code at hand.
When the jury retired for deliberation, we asked the participants about their experiences: what was the best and the most challenging, what did you learn, what was fun?
During a break the teams received the feedback sheet directly. Because if you send this in, you have to run after the answers.

< Feedbackform >

We decided to have drum rolls before from the audience when announcing the winners, we played a song that honors the teams and we did a virtual toast. Mentioning the names of the team members again and giving them a single applause (by sign) can also be very effective.
We also sent out packages in advance, which they could then unpack together.

The jury now gives its assessment of each project.

Finally, a few nice closing words are important. Best wishes for the future, thanks to the participants and the team, partners and sponsors etc.

Tools: Spotify, Mentimeter, Google Forms, Chat, Zoom

The End :)

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