Call for Code P-TECH Challenge

What is the Call for Code P-TECH Challenge?

This initiative gathers students, teachers, and mentors to create practical, effective, and quality applications based on IBM cloud, data, and artificial intelligence that can have an immediate and lasting impact on humanitarian issues. The two main goals:

1. Activate P-TECH students, teachers, and mentors to create practical solutions to global problems using IBM offerings and expertise such as cloud, AI, big data, etc.
2. Create learning opportunities that engages the larger P-TECH network for students to refine their Workplace Learning skills.

What is The Call for Code P-TECH Challenge topic?

There are two main topics that students can choose: COVID-19 and Climate Change. Below is the suggested topics and technology.

Main Topic	Covid-19	Climate Change
Subtopics	• Crisis communication • Remote education • Community cooperation	• Water sustainability • Energy sustainability • Disaster resiliency

	Recommended Services to Create Team Solution
No coding needed	• Watson Assistant
	• Mobile apps – i.e.: quiz app, speech-to-text app • Build a website • Build a weather dashboard

Rules and Regulations

1. **Mandatory Events that need to occur during the 14 week period between (01/04/21 - 06/18/21)**
    i. Watch the Kick-off Event
    ii. Design Thinking Workshop 1
    iii. Design Thinking Workshop 2
    iv. 48-hour Hackathon

2. **Recommended Events/Learning**
    i. Pre-event Hackathon Workshop
    ii. Learning modules on Open P-TECH, raw materials, developer toolkits, etc.

3. **Team Regulations**
    i. Teams of two to five (2-5) participants.
    ii. Each participating school must put forth a minimum of two teams
    iii. Each student MUST be under the age of 18 at start of competition - January 04, 2021.
    iv. Each student MUST be part of a P-TECH program or P-TECH School community.
    v. Each student can only join 1 team.
    vi. Each team needs an IBM Mentor and Community member. IBM Mentors and Community members can support more than 1 team, if needed.
    vii. An IBM mentor is an employee who works for IBM.
    viii. A Community member is a teacher, professor, school staff, school parent or community leader within that specific P-TECH Community.

4. **Participation agreement**
    i. All team members must have accepted the 2021 Participation Agreement and Media Release Agreement at the time of registration.
    ii. Each Country can host a 48-hour hackathon before June 18, 2021.
    iii. It is up to each P-TECH Program Manager to determine the event window and make sure 100% of teams submit their solution before the 48-hours conclude.

5. **Submissions**
    i. Submissions must use one or more IBM Cloud services or IBM Systems.
    ii. Use of sponsor or affiliate APIs and open source libraries is also encouraged.
    iii. Each team is required to submit:
        1. A written summary (maximum of 250 words) that outlines the nuanced problem, intended user, rationale for chosen IBM service/design, and intended solution.
        2. At least 20 lines of written code (or commands).
        3. A recorded oral presentation (maximum of 3 minutes) that includes full participating of the team explaining the solution and the impact their solution will have on their intended user and user community.
    iv. Submissions may be in the teams' native language.

6. **Application standards**
    i. Applications must be new and built for the Call for Code P-TECH competition.
    ii. May use code that was open sourced and publicly available to all other participants as of February 26, 2020.

7. **Winners**
    i. Winning teams will be subject to a code review after submissions close.

Prizes

- 1 Global winner
- 1 Regional winner (per continent)
- 1 School based winner (per school)

At the close of the virtual Hackathon, judges will select 1 for each category. A team cannot win the Global, and Regional, and School event. Therefore, there needs to be 1 unique team for each selection.

Global	• iPad Air • Continue working on project for another 4 weeks and present to an IBM executive • Featured in an internal media story and pitched to external media
***Regional**	• iPad
School	• Water bottle

** Regional Winner is defined as 1 school per participating continent

Judging Criteria

- **Design**
  - **The project design is appropriate**: Did the team choose the appropriate technology and strategy to build a solution for the intended user.
  - **The project design is compelling:** How good is the design? Would the user want/need the intended technology produced?
  - **The project design is well organized**: Design is easy to follow, all content is clear, accurate, and composed of a complete idea.
  - **The project design is easily implemented:** How quickly can the design be utilized in a community or society intended for the user and the user experiences? Consider the end user and their situation – consider the individual's stress, access to network, etc.

- **Effectiveness and Efficiency**
  - Does the solution address a high priority area?
  - Is the solution easily scalable?
  - Is the problem clearly quantified?
  - Does the solution demonstrate a clear impact for the user and the user experience?

- **Creativity and Innovation**
  - How unique is the approach to solving a long-standing or intractable problem?
  - Does this solution add a unique perspective/view to the problem and create a different solution?

- **Completeness and Transferability**
  - How fully is the idea implemented? How mature is the solution? Can the solution easily be nurtured and improved?
  - Can it achieve an impact in the intended field? Is the next phase of this solution concrete and comprehensible?
  - Can the solution be transferred elsewhere?
  - Can the solution be used multiple times?

Call for Code P-TECH Challenge Judging Rubric

	1	2	3	4	5
Design	Project design choice is ***not*** understandable but might not be compelling or well organized. A new user would need ***lots of support and additional instruction*** to use or add to design	Project design choice is ***not*** understandable but might not be compelling or well organized. A new user could use/add to this design with ***some*** additional instruction to use or add design	Project design choice is **somewhat appropriate** but might not be compelling or well organized. A new user would need ***lots of support and additional instruction*** to use or add to design	Project design choice is **somewhat appropriate** but might not be compelling or well organized. A new user could use/add to this design with ***some*** additional instruction to use or add design	Project design choice is ***appropriate, compelling, and well organized.*** A new user could use/add to this design ***without any additional instruction.***
Effectiveness and Efficiency	Solution does not address a high priority need related to COVID-19 or Climate Change.	Solution addresses a high priority need related to COVID-19 or Climate Change ***but solution is not quantifiable.***	Solution addresses a high priority need related to COVID-19 or Climate Change ***but solution does not seem impactful or easy to scale.***	Solution addresses a high priority need related to COVID-19 or Climate Change. Solution is clear, impactful, ***but not easy to scale.***	Solution addresses a ***high priority need*** related to COVID-19 or Climate Change. Solution is ***clear, impactful, and is easy to scale***.
Creativity and Innovation	The solution ***is not*** unique and ***does not add anything new***	The solution is ***slightly*** unique and slightly adds a new perspective/view	The solution is ***mostly*** unique and adds a new perspective/view	The solution is unique, adds a new perspective/view	The solution is unique, adds a new perspective/view and is ***ground breaking (completely original).***
Completeness and Transferability	The physical solution ***needs significant improvement.*** The idea and solution is ***vague and unclear.***	The physical solution is ***somewhat*** mature. The idea and solution is ***vague and unclear***	The physical solution is ***somewhat*** mature. The idea and solution is ***somewhat*** concrete, comprehensible.	The physical solution is mature, and the idea is fully implemented. The idea and solution is concrete, comprehensible,	The physical solution is ***mature***, and the idea is ***fully implemented***. The idea and solution is

				but not easy to continuously implement or transfer	***concrete, comprehensible, and easily transferred an infinite amount***.
					Total Score: /20

Sample Schedule

Week of Jan. 04, 2021	**Feb. 2021-March 2021**	**March 29,-April 9, 2021**	**Week of June 28th**
• View Kickoff Video • Recruit and register students • Recruit and register teachers • Recruit and register IBM mentors • Engage in learning	• Participate in DT workshop 1 • Participate in DT workshop 2 • Engage in learning	• Participate in virtual Hackathon • Submit Entries	• Judges choose winners • Awards Ceremony