PROVISIONAL COMPETENCY FORM

Note: Throughout this document, the masculine gender is used generically to refer to any person, regardless of gender.

Student: Name: ..... First name: .....

Year - Specialty: 4A Computer Science

Internship dates: from..... to .....

Host Organization: .....

Internship Subject: .....

.....

POLYTECH LYON
Internship Service

Phone: +33 (0)4 72 43 17 77
entreprise@polytech-lyon.fr

Professional Supervisor: .....

Departement / Position: .....

Email: ..... Phone: .....

Academic Advisor : .....

Email: ..... Phone: .....

Date: Student's signature: Signature of the Professional Tutor:

Form to be returned by email to the referent teacher at the latest at the end of the 1st month of the internship

The purpose of this document is to enable the student intern and his or her professional tutor to **define together, in a forward-looking manner from the beginning of the internship, the elements of the Training Framework (associated skills and key learning**, see Appendix on the last page**) that will be mobilized during the mission and evaluated**.

For each skill developed during the internship (at least one of the 4 skills in the framework), the tables must be completed as follows:

- **Table 1**: *Competency addressed on during the internship*: check only the box on the left if the competency will be mobilized and developed during the internship. *Student's Self-Perceived Competency*: in the right-hand columns, the student positions his or her current self-assessment with regard to this competency and its key components. A guide to help with positioning on the different levels is available in the appendix, on the last page of this document.
- **Table 2** - *Key learnings from the internship*: for each selected skill, also tick the associated key learnings that will be mobilized during the internship to allow the exercise of the skill in context, according to the missions and tasks that make up the internship program.

Example - If the internship aims to develop, among other things, the skill C1 "Developing a computer application": ➔ *Table 1: The skill is ticked in the **left-hand column**. - The student positions his or her current feeling of competence with regard to C1 and its essential components in the **right-hand** columns. Table 2 - The student and the professional tutor select together the key learning of the C1 competency that is planned to be mobilized during the internship.*

Table 1: Competency and Core Components

↓ *Cocher cette case si la compétence sera développée au cours du stage*		**Sentiment de compétence de l'étudiant**			
		Haute-ment capable	Capable	En partie capable	Pas capable
X	Compétence **C1 : DÉVELOPPER UNE APPLICATION INFORMATIQUE**		X		
Composantes essentielles	En définissant les objectifs, contraintes et exigences		X		
	En spécifiant les fonctionnalités		X		
	En concevant l'architecture et l'interface de la solution		X		
	En développant avec les technologies adéquates les algorithmes pertinents		X		
	En déployant et maintenant l'application			X	

Table 2: Key learnings

	Apprentissages-clés de la Compétence **C1** ↓ *Cocher les cases correspondant aux apprentissages-clés mobilisés au cours du stage.*
X	Concevoir l'architecture d'une application
	Identifier les couches et développer des composants modulaires
	Concevoir et gérer une base de données
X	Mettre en œuvre les bases du développement Front-end et Back-end
	Gérer une authentification basique
X	Utiliser une forge logicielle
	Organiser la communication entre les processus / composants
	Concevoir et gérer une base de données répartie
	Tester et valider les composants et leur intégration
X	Rédiger une spécification fonctionnelle

↓ *Check this box if the skill will be developed during the internship*		**Student's sense of competency**			
		Highly capable	Capable	Partly capable	Not able
	Competency **C1: DEVELOPING A COMPUTER APPLICATION**				
Essential Components	By defining objectives, constraints and requirements				
	By specifying the features				
	By designing the architecture and interface of the solution				
	By developing the relevant algorithms with the appropriate technologies				
	By deploying and maintaining the application				

Key learnings of Competency **C1**	
↓ *Tick the boxes corresponding to the key learnings used during the internship.*	
	Designing an application architecture
	Identify layers and develop modular components
	Design and manage a database
	Implement the basics of front-end and back-end development
	Manage basic authentication
	Using a Software Forge
	Organize communication between processes/components
	Design and manage a distributed database
	Test and validate components and their integration
	Write a functional specification
Comments	

↓ *Check this box if the skill will be developed during the internship*		**Student's sense of competency**			
		Highly capable	Capable	Partly capable	Not able
	Competency C2: **LEADING AN IT PROJECT**				
Essential Components	Effectively planning project phases based on customer needs and context				
	By implementing a project management method adapted to the context (agile, V-cycle)				
	By effectively managing the teams and the various stakeholders of a project				
	By taking into account the challenges and risks in IT security				
	Communicating effectively throughout the project internally and externally				
	By taking into account eco-design and CSR approaches				

Key learnings of Competency **C2** ↓ *Tick the boxes corresponding to the key learnings used during the internship*	
	Analyze the needs of the sponsor
	Implement an agile method (scrum) to organize the project
	Communicate on the progress of the IT project (progress report, daily meeting, defenses, etc.)
	Write technical and user documents
	Implement a versioning tool (GIT)
	Write an analysis of the organization's operations, missions and tools
	Communicate with the various interlocutors in an international and intercultural context
Comments	

↓ *Check this box if the skill will be developed during the internship*		**Student's sense of competency**			
		Highly capable	Capable	Partly capable	Not able
	Competency **C3**: **BUILDING SOLUTIONS BASED ON DATA AND ARTIFICIAL INTELLIGENCE**				
Essential Components	By choosing the right algorithms and tools for the project				
	By implementing the algorithms				
	By setting up a protocol for evaluating the methods and algorithms implemented				
	By complying with standards and recommendations in terms of data law and ethics (GDPR, AI, Act)				
	By adapting its communication to a plurality of socio-economic actors				

Key learnings of the **C3 Competency**	
↓ *Tick the boxes corresponding to the key learnings used during the internship*	
	Implement algorithms and applications with programming languages (Python, Java, etc.)
	Set up databases (relational and NoSQL)
	Perform statistical analysis
	Implement algorithms
	Structure data
	Design dashboards
Comments	

↓ *Check this box if the skill will be developed during the internship*		Student's sense of competency			
		Highly capable	Capable	Partly capable	Not able
	Competency **C4: SETTING UP AN INFORMATION SYSTEM AND IT INFRASTRUCTURE**				
Essential Components	By defining the objectives, constraints and requirements of the specifications				
	By implementing the right technologies				
	By putting in place relevant security mechanisms				
	By adapting its communication to the various actors of the project				

Key learnings of Competency **C4**	
↓ *Tick the boxes corresponding to the key learnings used during the internship*	
	Design a relational and object-oriented data model
	Design a process model
	Set up a software forge and versioning tool
	Manage the workstation and server
	Administering a Local Area Network
	Meet the specification of a distributed application
Comments	

ANNEX

Competency-Based Approach and Skills Framework: The Essentials

This Provisional Competency Form part of the **Competency-Based Approach** (in French: *Approche par Compétences, APC*), an educational methodology to assess the future engineer's ability to act effectively in real-world professional situations. This approach relies on a Competency Framework, a structured guide defining the key "complex abilities to act" that students must master by the end of their program.

For the Polytech Lyon Computer Science degree program, this framework consists of **4 Competencies** (C1 to C4), which are representative of a Computer Scientist's activities and are linked to the Competency Blocks of the RNCP fiche 41376. The internship offers a prime opportunity for students to mobilize and develop one or more of these competencies in a professional setting.

The main elements of this framework fall into 3 categories:

- **Competence**: this is a "complex ability to act" that enables an individual to perform effectively in each situation by appropriately mobilizing and combining various resources (knowledge, know-how, soft skills/attitudes). Unlike a simple skill, a competency involves adapting to the specifics of situations and contexts by making justified choices.
- **Essential Components**: also known as "performance criteria for a competency, " these are the specific criteria that describe the expected quality of action when the competency is implemented. They generally specify the resources to be mobilized, the rules or constraints to be respected, the methodological approaches, communication methods, and the quality of the outcome.
- **Key Learning**: these are the essential learnings necessary for the exercise of a competency. They involve mobilizing multidisciplinary resources of various kinds (knowledge, know-how, soft skills/attitudes).

Sense of competence

It is the **subjective feeling** of the student at a given moment in his or her training, with regard to the mastery of a skill and its essential components.

Help with self-assessment of the sense of competence	
Highly capable	*"I feel very comfortable with this skill. I think I can act autonomously and even take initiative in most situations, including new or complex ones. I usually have a good idea of the knowledge and skills that need to be mobilized to achieve excellent results."*
Capable	*"I think I have mastered this skill well. In typical situations, I feel able to act globally autonomously using the right resources. I should be able to adapt, justify my choices and get results that are in line with what is expected."*
Partly capable	*"I am in the process of acquiring this skill. I think I can act in certain situations, but I know that I may encounter difficulties in mobilizing all the necessary resources or in adapting to specific contexts. I will probably need regular support to do well and justify my actions."*
Not able	*"At the moment, I don't feel at all comfortable with this skill. I would find it very difficult to act in the situations concerned or to mobilise the necessary knowledge and know-how. I think I would need a lot of help to achieve anything in this area."*

Additional advice to the student:

- **Be honest with yourself** : the objective is to draw up an initial inventory to better assess your progress.
- **Think about your past experiences** : previous internships, academic projects, personal experiences can give you some indications.
- **Don't overestimate yourself, don't underestimate yourself, try to find the right balance**. It is quite normal not to feel "Capable" (and even less "Highly capable") on all the items at the beginning of the internship.
- **If you are very hesitant, your pedagogical referent can help you think about your positioning**.