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| Chapitre 1  Interfaces de programmation d’applications |

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| Compréhension du cours |  |

Que signifient en anglais les trois lettres « API » ? Et en français ?

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On interroge l’API *Base Adresse Nationale* pour trouver une adresse en France à partir des coordonnées géographiques du lieu.

En envoyant une requête à l’URL https://api-adresse.data.gouv.fr/reverse/?lon=0.0&lat=45.0 on obtient la réponse suivante :

{"type": "FeatureCollection",

"version": "draft",

"features": [{"type": "Feature",

"geometry": {"type": "Point",

"coordinates": [-0.000215, 44.9979]},

"properties": {"label": "50 Le Petit Bois 33660*(…)*

*(…)* Puynormand",

"score": 0.9999781028039414,

"housenumber": "50",

"id": "33347\_b057\_00050",

"name": "50 Le Petit Bois",

"postcode": "33660",

"citycode": "33347",

"x": 463632.95,

"y": 6437676.73,

"city": "Puynormand",

"context": "33, Gironde, Nouvelle-*(…)*

*(…)*Aquitaine",

"type": "housenumber",

"importance": 0.28602,

"street": "Le Petit Bois",

"distance": 233}}],

"attribution": "BAN",

"licence": "ETALAB-2.0",

"limit": 1}

Dans quel format les données ci-dessus ont-elles été obtenues ?

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On suppose désormais que les données ci-dessus sont stockées dans une variable reponse.

Quel est le type de reponse["type"], de reponse["features"] et de reponse["limit"] ?

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Comment accéder à l’adresse complète du lieu ?

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Définir une fonction adresse\_lieu qui :

* prend en entrée un couple de flottants coord au format (latitude, longitude), et qui
* renvoie sous forme de chaîne de caractères l’adresse du lieu situé aux coordonnées spécifiées.

Dans le cas où l’API ne trouverait pas d’adresse pour les coordonnées spécifiées, la fonction renvoie une chaîne de caractères vide.

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Après avoir implémenté et testé la fonction adresse\_lieu, compléter le tableau suivant.

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| **Coordonnées géographiques** | **Chaîne de caractères renvoyée par la fonction adresse\_lieu** |
| (45.0, 0.0) |  |
| (48.847, 2.491) |  |
| (45.1608, 1.5330) |  |

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| Astéroïdes à surveiller | |  | | --- | | **CAPYTALE**  **9b7d-34563** | |

**Question 1**

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**Question 3**

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| Bulletin météo | |  | | --- | | **CAPYTALE**  **90ad-34553** | |

**Question 3**

**Date et heure française :**

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| **Lieu** | **Temps** | **Température** | **Pression atmosphérique** | **Taux d’humidité** |
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Notes

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| Composition des produits alimentaires | |  | | --- | | **CAPYTALE**  **937b-34567** | |

**Question 1**

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| **Nom** |  |
| **Rôle** |  |
| **Entrée(s)** |  |
| **Sortie** |  |

**Question 2**

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| **Quantité d’énergie** |  |
| **Quantité de sel** |  |
| **Quantité de sucres** |  |
| **Quantité de matières grasses** |  |
| **Quantité de fibres** |  |
| **Quantité de protéines** |  |

**Question 3**

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| **Nom** |  |
| **Rôle** |  |
| **Entrée(s)** |  |
| **Sortie** |  |

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| Découpage administratif | |  | | --- | | **CAPYTALE**  **6951-34569** | |

**Question 1**

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**Question 2**

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| Carte de vigilance météorologique |  |

**Question 1**

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**Question 2**

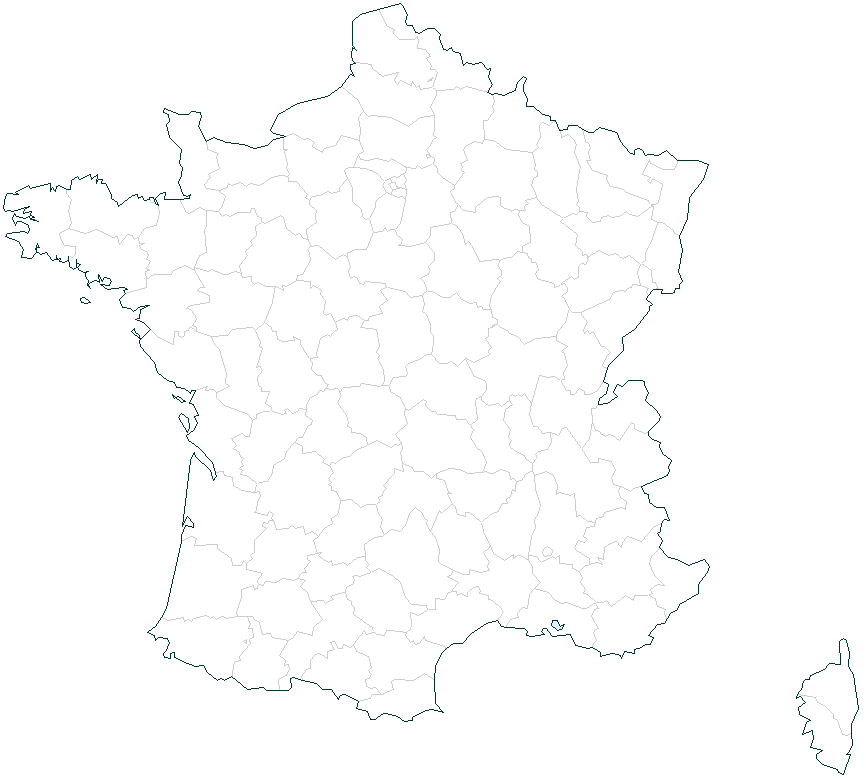
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| **Numéro du département** |  |
| **Couleur correspondant au risque**  **identifié dans le département** |  |

Notes

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**Question 4**

**Date de la carte de vigilance de Météo France :**



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| Centres de vaccination anti-Covid | |  | | --- | | **CAPYTALE**  **a0a8-34518** | |

**Question 1**

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**Question 2**

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| **Nom du centre de vaccination** |  |
| **Coordonnées géographiques** |  |
| **Adresse complète** |  |

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| Station spatiale internationale | |  | | --- | | **CAPYTALE**  **52f9-34500** | |

**Question 1**

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|  | **Clé** | **Valeur associée à la clé** |
| **1** |  |  |
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**Question 2**

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| **Nom** |  |
| **Rôle** |  |
| **Entrée(s)** |  |
| **Sortie** |  |

**Question 5**

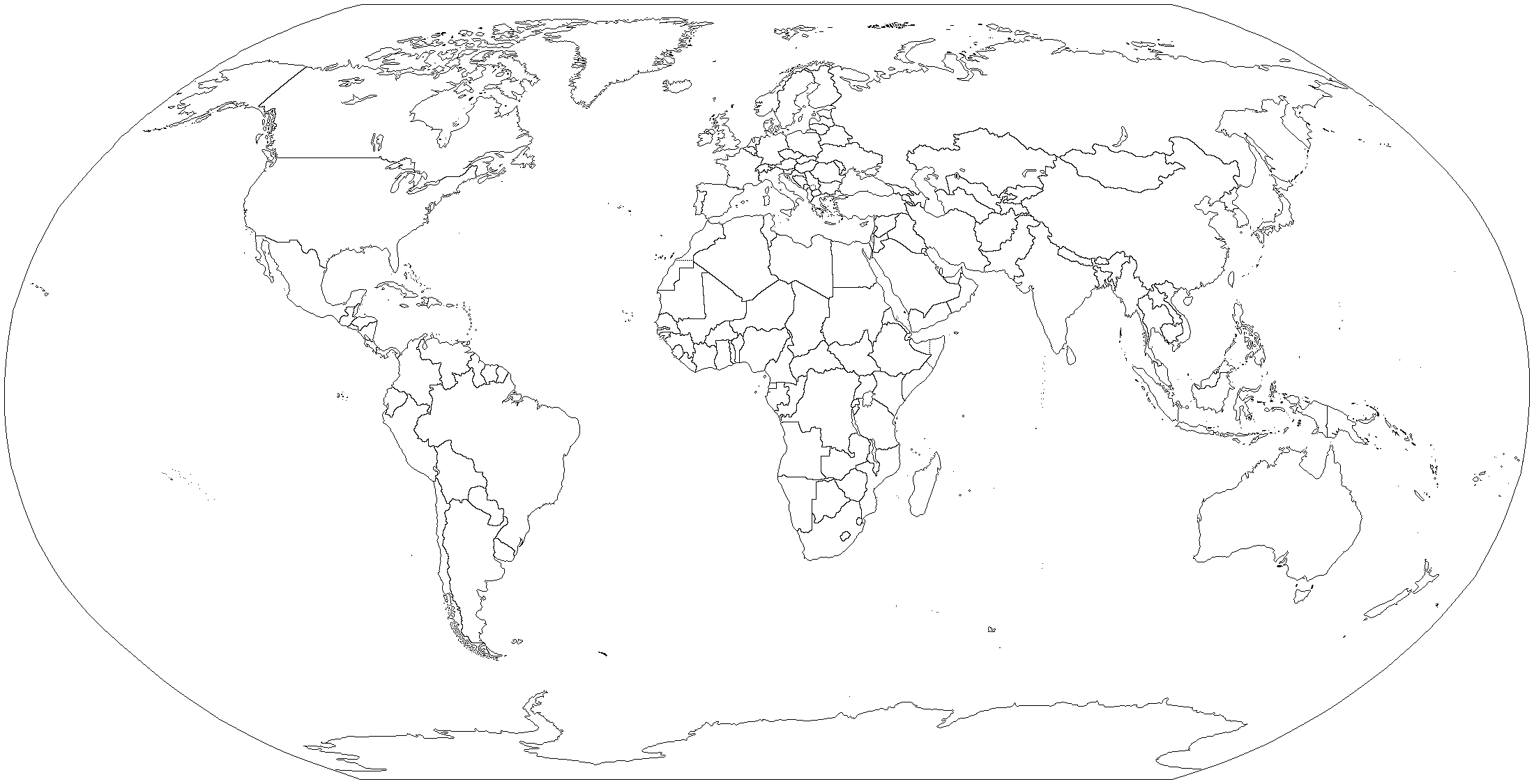
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| **Nom** |  |
| **Rôle** |  |
| **Entrée(s)** |  |
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**Question 6**

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**Question 7**

**Date et heure du début des relevés :**



*Six positions successives de la station spatiale internationale, relevées toutes les cinq minutes*

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| Dictée de code |  |

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